

# *TECHNICAL INFORMATION*

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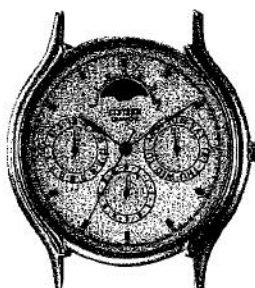
## **CITIZEN QUARTZ**

**Cal. No. 43※※※**

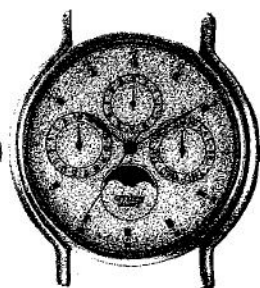
(Excepto No. de Cal. 438/439※※)



(Cal. No. 4300※)



(Cal. No. 4310※)



(Cal. No. 4330※)

## §1. OUTLINE

- Cal. No. 4300※

This is an analog multi-hand quartz watch with three analog hands (hour, minute, second) and three small hands indicating date, day and dual time.

- Cal. No. 4310※

This is an analog multi-hand quartz watch with three analog hands (hour, minute, second) and three small hands indicating date, day and time of the 24-hour system. This watch also indicates the age of the moon.

- Cal. No. 4330※

This analog multi-hand quartz watch has the Sun & Moon dial in the direction of six o'clock, as well as the functions of Cal. No. 4300※.

## §2. SPECIFICATIONS

| Caliber No.                 |                                                           | 4300A-01                                                   | 4310A-01                                             | 4330A-01                                      |
|-----------------------------|-----------------------------------------------------------|------------------------------------------------------------|------------------------------------------------------|-----------------------------------------------|
| Type                        |                                                           | Analog quartz watch with a sweep second plus 3 small hands |                                                      |                                               |
| Module size (mm)            |                                                           | φ23.7 x 22.6 x 3.7 t                                       |                                                      |                                               |
| Accuracy                    |                                                           | ±20 sec/month (at normal temperature)                      |                                                      |                                               |
| Oscillation                 |                                                           | 32,768 Hz                                                  |                                                      |                                               |
| Integrated circuit          |                                                           | C/MOS-LSI (1 unit)                                         |                                                      |                                               |
| Effective temperature range |                                                           | -10°C ~ +60°C (14°F ~ 140°F)                               |                                                      |                                               |
| Converter                   |                                                           | Bipolar step motor                                         |                                                      |                                               |
| Adjustment of time rate     |                                                           | Digital frequency control (in factory only)                |                                                      |                                               |
| Measurement of time rate    |                                                           | 10 seconds                                                 |                                                      |                                               |
| Additional functions        | Date display (with quick setting device)                  | Installed (Small hand)                                     | ←                                                    | ←                                             |
|                             | Day display                                               | Installed (Small hand)                                     | ←                                                    | ←                                             |
|                             | Dual time display                                         | Installed (Small hand)                                     | Not installed                                        | Installed (Small hand)                        |
|                             | 24-hour system display                                    | Not installed                                              | Installed (Small hand)                               | Not installed                                 |
|                             | Indication of age of the moon (with quick setting device) | Not installed                                              | Age of the moon dial rotating one turn every 59 days | Not installed                                 |
|                             | Indication with picture dial                              | Not installed                                              | ←                                                    | Installed (Sun & moon)                        |
|                             | Second and stopping device                                | Installed                                                  |                                                      |                                               |
|                             | Power saving switch                                       | Installed                                                  |                                                      |                                               |
| Power cell                  |                                                           | Part No.: 280-39<br>Cell No.: SR626SW                      | Size (mm): φ6.8 x 2.6 t<br>Voltage: 1.55 V           | Capacity: 26 mAH<br>Lifetime: Approx. 2 years |

### 53. HANDLING INSTRUCTION

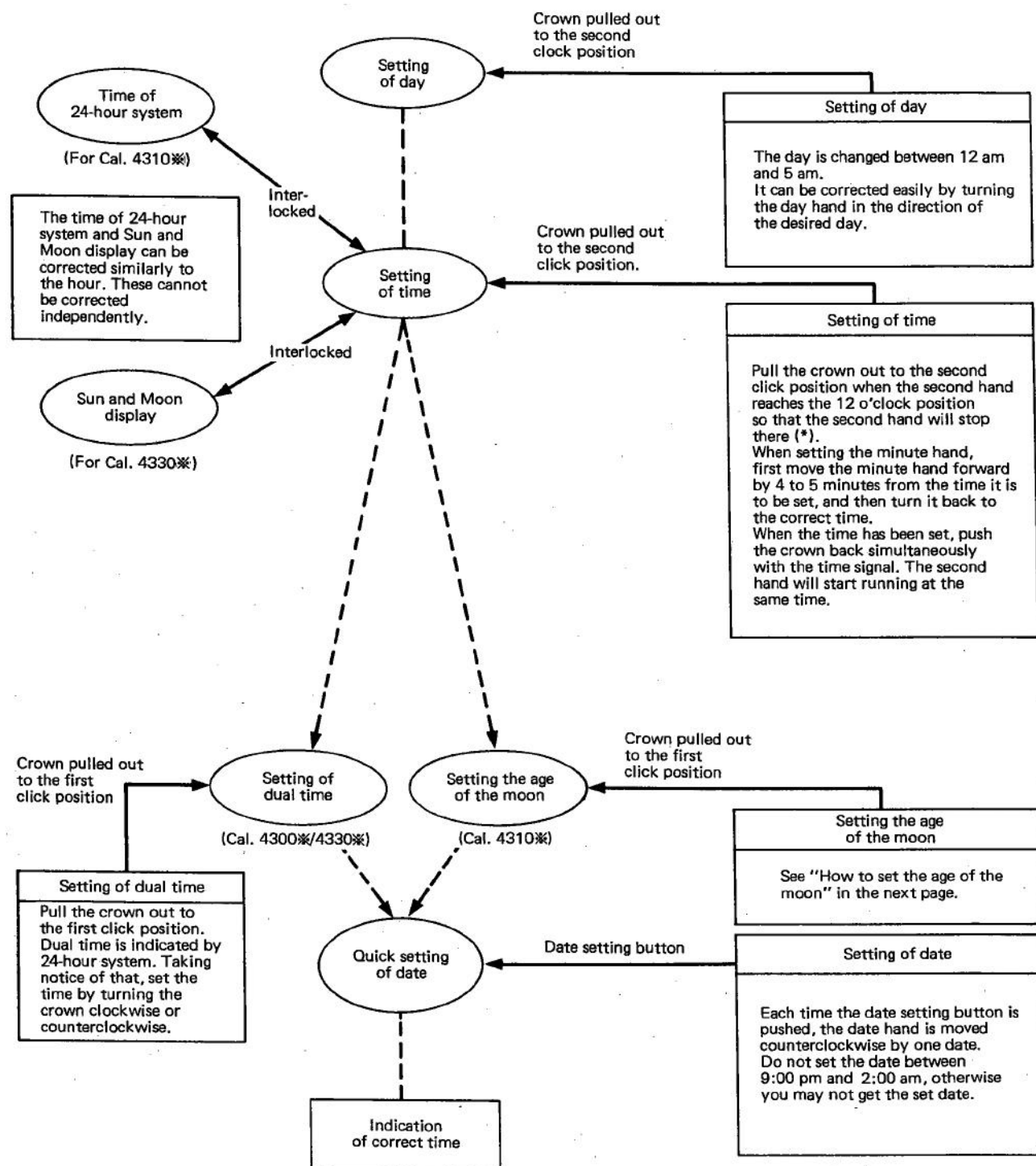
#### 3-1. Name of each part

|            |                                                                                                                                                                                                                                                                                                                     |
|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Cal. 4300X | <p>Diagram of Cal. 4300X watch face. Labels point to: Dual time (24-hour system) at the 12 o'clock position, Date setting button at the 9 o'clock position, Date at the 3 o'clock position, Day at the 6 o'clock position, and Crown at the 3 o'clock position.</p>                                                 |
| Cal. 4310X | <p>Diagram of Cal. 4310X watch face. Labels point to: Age of the moon at the 12 o'clock position, Date setting button at the 9 o'clock position, Date at the 3 o'clock position, Time of 24-hour system at the 6 o'clock position, Day at the 6 o'clock position, and Crown at the 3 o'clock position.</p>          |
| Cal. 4330X | <p>Diagram of Cal. 4330X watch face. Labels point to: Dual time (24-hour system) at the 12 o'clock position, Date setting button at the 9 o'clock position, Day at the 6 o'clock position, Sun and Moon display at the 6 o'clock position, Date at the 3 o'clock position, and Crown at the 3 o'clock position.</p> |

#### 3-2. How to see each indication

|         | Day | Date | Time on the 24-hour system | Dual time | Age of the moon |
|---------|-----|------|----------------------------|-----------|-----------------|
| Normal  |     |      |                            |           |                 |
| Setting |     |      |                            |           |                 |

### 3-3. Setting each indication



- \* This function is called the second hand stopping device used as the power saving switch, too.
- \* After each indication is set, push the crown in to the normal position.

● **How to set and read age of the moon (Cal. 4310※)**

- \* This function indicates the age of the moon, but does not display the shape of the moon.
- \* Use the moon dial only as a guide to the age and phase of the moon when reading and setting the watch.

**1) Setting the age of the moon**

- In case the watch is equipped with the age of the moon scale

**(1) Confirming today's or tomorrow's age of the moon**

Check today's or tomorrow's age of the moon with a newspaper.  
If tomorrow's age of the moon is found, subtract one day from it.

**(2) Setting the age of the moon (Example: age of the moon: 4.4)**



Pull the crown to the first click position and rotate the moon mark clockwise until the center of the moon comes to around the position of 4.4 of the age of the moon scale.

- In case the watch is not equipped with the age of the moon scale

In this case, when the age of the moon shown in a newspaper, is 0, 7, 15 or 22, set the moon mark to the corresponding position of the age of the moon as shown in 2) "How to read the age of the moon" below.

The age of the moon can be set more accurately if it is set when it is 0 (New moon) or 15 (Full moon).

**2) How to read age of the moon (Example of indication)**

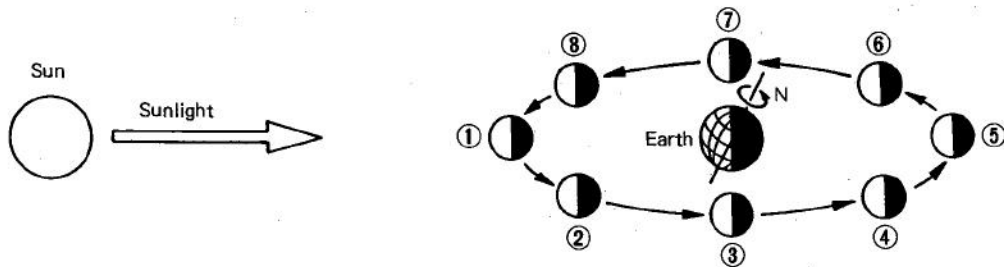
|   |                                                           |   |                                                                 |
|---|-----------------------------------------------------------|---|-----------------------------------------------------------------|
| 1 | New moon<br>Age of the moon: 0<br>(Spring tide)           | 3 | First quarter moon<br>Age of the moon: Approx. 7<br>(Neap tide) |
|   |                                                           |   |                                                                 |
| 5 | Full moon<br>Age of the moon: Approx. 15<br>(Spring tide) | 7 | Last quarter moon<br>Age of the moon: Approx. 22<br>(Neap tide) |
|   |                                                           |   |                                                                 |

- \* The level of the tide can be seen from the indicated age of the moon.
- The age of the moon can be set more accurately if it is set when it is the New moon (the moon mark cannot be seen at all — Age of the moon: 0) or the Full moon (the moon mark is at the top (position of 12 o'clock) — Age of the moon: 15).

### 3) What is the age of the moon

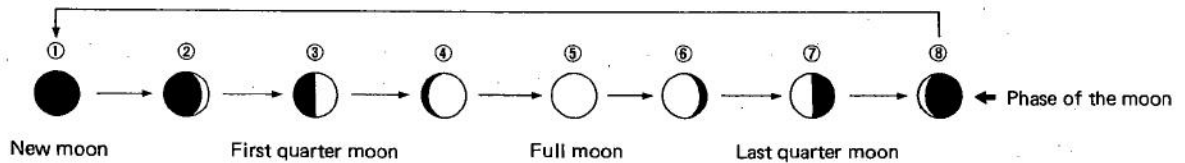
- Waxing and waning of the moon

The waxing and waning of the moon are caused by the change of the positions of the sun and moon viewed from the earth.



When the moon is at position (1) shown above (the sun and moon are in the same direction), the moon viewed from the earth is illuminated from its back. The moon is called the new moon at this time.

The moon can be seen at various positions as shown below.



The moon waxes and wanes repeatedly in order of (1) – (8) – (1).

- The age of the moon

The age of the moon is indicated in units of days. The average period from a new moon to the next new moon is equivalent to about 29.5 days.