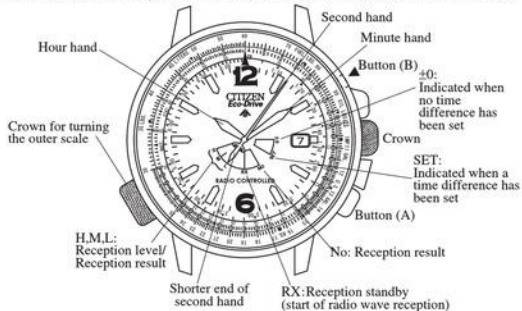


- This watch indicates the reception level and reception result with the shorter end of the second hand.



The design may differ according to the model.

### ■ This watch is a radio wave watch that receives the standard time radio wave transmitted in Germany. ■

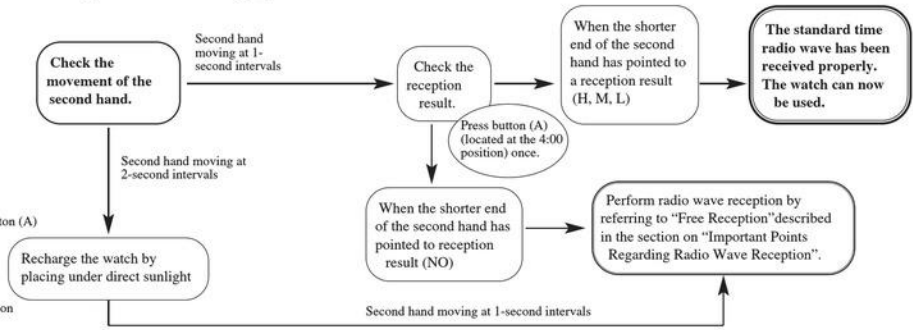
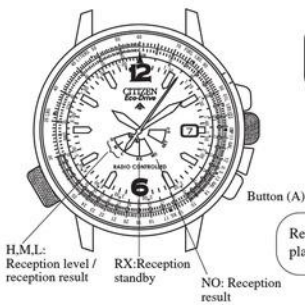
This radio wave watch is equipped with a regular automatic reception function that sets the time and date by automatically receiving radio waves twice a day at 3:00 AM and 4:00 AM, and a free reception function that allows the time to be set arbitrarily by receiving radio waves. A time difference can also be set in 1 hour units based on German standard time.

- This watch only receives the standard time radio wave transmitted in Germany during radio wave reception. It is unable to receive radio waves of countries other than Germany.
- When using the watch in a location that has a different time difference than that of Germany, set the time difference by referring to the section entitled, "5. Time Difference Correction Function". If the standard time radio wave transmitted in Germany is received after setting the time difference by another method, the time will return to German standard time.

**■ Please use this watch after charging sufficiently by placing in light. ■**

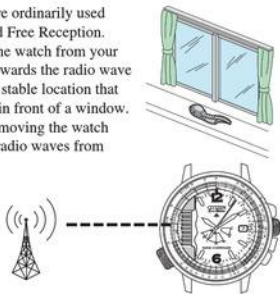
If the second hand of the watch is moving at two-second intervals while the watch is in use, this indicates that the watch is insufficiently charged. Use the watch after first recharging by placing the watch under direct sunlight for about 8 hours. To ensure that this Eco-Drive Radio Wave Watch is used comfortably without stopping, it is recommended to try to keep the watch fully charged at all times.

■ Please confirm the following before using ■  
the watch.



## ■ Important Points Regarding Radio Wave Reception ■

The two ways to receive radio waves that are ordinarily used consist of Regular Automatic Reception and Free Reception. When receiving radio waves, first remove the watch from your wrist, face the 9:00 position on the watch towards the radio wave transmitter station, and place the watch in a stable location that facilitates reception of radio waves such as in front of a window. Since the watch uses a directional antenna, moving the watch while reception is in progress may prevent radio waves from being properly received. When reception is completed, the second hand returns to one-second interval movement. Do not move the watch until radio wave reception is completed.



### [Regular Automatic Reception]

The watch sets the time and date by automatically receiving radio waves at the predetermined times of 3:00 AM and 4:00 AM each day.

#### <Confirmation of Reception>

Check the reception result to determine whether or not radio waves have been received properly by pressing button (A) located at the 4:00 position once. If the shorter end of the second hand points to H, M or L, this indicates that radio waves have been received properly. The watch can now be used.

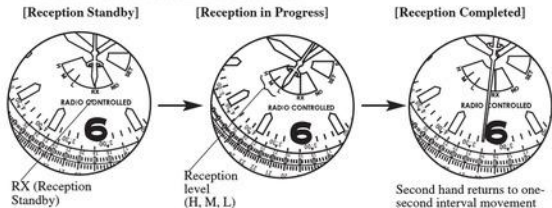
If the shorter end of the second hand points to NO at the 5:00 position, this means that radio waves were unable to be received properly. If this happens, perform radio wave reception using the Free Reception function.

### [Free Reception]

The Free Reception function lets you receive radio waves at any time. Use this function when the reception environment has changed or in other cases when radio waves are unable to be received by Regular Automatic Reception.

#### <Reception Procedure>

- (1) Press button (A) located at the 4:00 position for about 2 seconds, and then release the button after the shorter end of the second hand has moved to the RX (6:00) position.
- (2) The shorter end of the second hand then moves to H, M or L indicating that reception is in progress.
- (3) When reception is completed, the shorter end of the second hand moves from H, M or L and returns to one-second interval movement.



\* Refer to "3. Receiving Radio Waves" for further details on the procedure for receiving radio waves.

## ■ When Storing in a Dark Location for a Long Period of Time ■

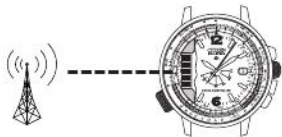
If the watch is stored in a location out of the light for a period of one week or more, the Power Save Function of the watch is activated and the watch stops. Even though the watch is in the Power Save mode, it still continues to perform Regular Automatic Reception and the watch continues to keep the correct time internally. However, the time may not be able to be corrected as a result of being unable to receive radio waves depending on the manner in which the watch is stored. When resuming use of the watch after storing for an extended period of time, cancel the Power Save function by placing the watch in the light and then perform Free Reception to correctly set the time and date.

\* Refer to "7. A. Power Save Function" for information on the Power Save function.

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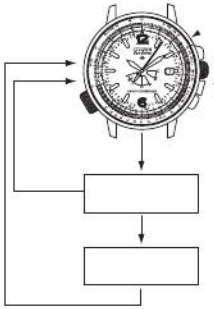
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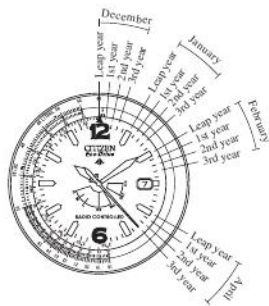


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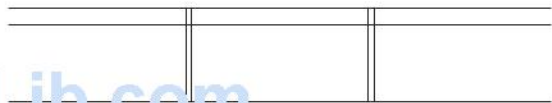


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## 5. Time Difference Correction Function

- This watch is equipped with a time difference correction function that lets you set a time difference in one hour units with respect to the received German standard time.
- When radio waves are received after having set a time difference, the time is displayed after correcting the set time difference.
- A time difference display monitor is provided that indicates whether or not a time difference is set with the shorter end of the second hand.

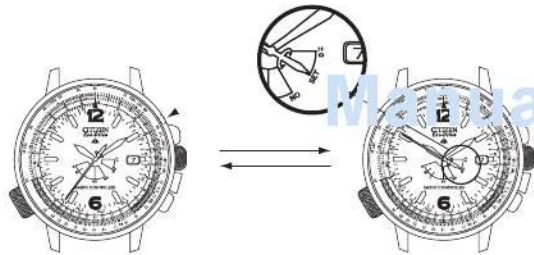
### <Time Difference Setting Procedure>

- (1) Put the crown in the normal position.
- (2) Press button (B) once.
  - The shorter end of the second hand moves to the SET or  $\pm 0$  position to indicate that the watch has entered the time difference correction mode.
- (3) Turn the crown to correct the time difference.
  - ① When the crown is turned (one click) to the right, the hour hand moves forward (clockwise) by one hour.
  - ② When the crown is turned (one click) to the left, the hour hand moves backward (counter-clockwise) by one hour.

- Although the hour hand moves continuously when the crown is rotated continuously (by two clicks or more), move the hour hand one hour at a time to ensure that the time difference is corrected reliably.
  - Turn the crown one click to the left or right to stop continuous movement of the hour hand.
- (4) Once the time difference has been set, the shorter end of the second hand moves to the SET position.
    - The shorter end of the second hand moves to the  $\pm 0$  position if a time difference has not been set.
  - (5) Press button (B) once after setting the time difference.
    - This completes the procedure for setting a time difference. The second hand returns to one-second interval movement.

### Notes:

- Correct the time difference while being careful not to mistake AM, PM or the date.
- Time difference can be corrected for 10 seconds after pressing button (B) or for 10 seconds after the hour hand has stopped moving after correcting the time difference.
- The watch automatically returns to the normal display if the crown has not been operated for 10 seconds after pressing button (B) or 10 seconds after correcting the time difference.



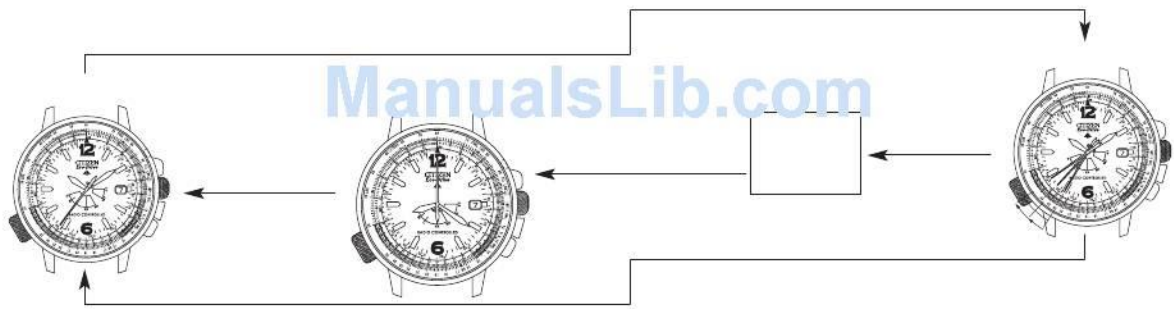
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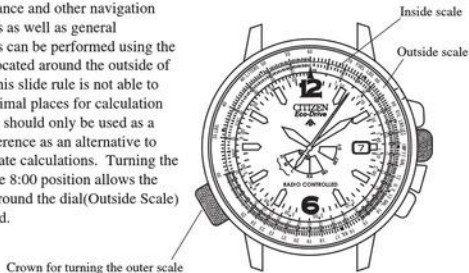
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### 13. Using the Slide Rule

Flying distance and other navigation calculations as well as general calculations can be performed using the slide rule located around the outside of the dial. This slide rule is not able to display decimal places for calculation results, and should only be used as a general reference as an alternative to more accurate calculations. Turning the crown at the 8:00 position allows the slide rule around the dial(Outside Scale) to be rotated.

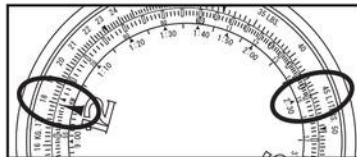


### A. Navigation Calculator

#### 1. Calculation of time required

**Question:** How long does it take an airplane flying at 180 knots to fly a distance of 450 nautical miles?

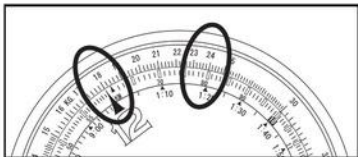
**Solution:** Set the 18 mark on the outside scale to the SPEED INDEX (▲). At this time, the point on the inside scale that is aligned with 45 on the outside scale indicates (2:30), and the answer is 2 hours and 30 minutes.



## 2. Speed (Ground Speed) Calculation

**Question:** What is the speed (ground speed) of an airplane when it takes 1 hour and 20 minutes to fly a distance of 240 nautical miles?

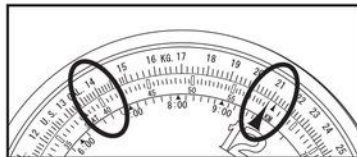
**Solution:** Align the 24 on the outside scale with 1:20 (80) on the inside scale. At this time, 18 is aligned with the SPEED INDEX (▲) on the inside scale, and the answer is 180 Kt.



## 3. Flying distance calculation

**Question:** What is the flying distance traveled in 40 minutes at a speed of 210 knots?

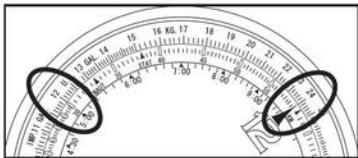
**Solution:** Align the 21 on the outside scale with the SPEED INDEX (▲) of the inside scale. The 40 of the inside scale is now pointing to 14, and the answer is 140 nautical miles.



#### 4. Fuel consumption rate calculation

**Question:** If 120 gallons of fuel are consumed in 30 minutes' flying time, what is the fuel consumption rate?

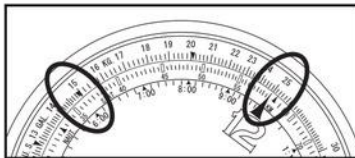
**Solution:** Align the 12 of the outside scale with 30 of the inside scale. The SPEED INDEX (▲) now points to 24, and the answer is 240 gallons per hour.



#### 5. Fuel consumption calculation

**Question:** How much fuel is consumed in 6 hours at a fuel consumption rate of 250 gallons per hour?

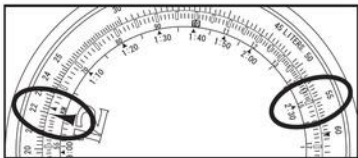
**Solution:** Align the 25 of the outside scale with the inside scale's SPEED INDEX (▲) of the inside scale. The 6:00 is aligned with 15, and the answer is 1500 gallons.



### 6. Maximum flying hours

**Question:** With a fuel consumption rate of 220 gallons per hour and a fuel supply of 550 gallons, what is the maximum number of flying hours?

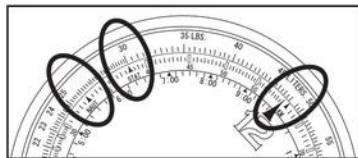
**Solution:** Align the 22 of the outside scale with the inside scale's SPEED INDEX (▲) of the inside scale. The 55 of the outside scale is now aligned with 2:30, and the answer is 2 hours and 30 minutes.



### 7. Conversion

**Question:** How do you convert 30 miles into nautical miles and kilometers?

**Answer:** Align the 30 on the outside scale with the STAT (▲) mark on the inside scale. At this time, 26 nautical miles is aligned at the NAUT (▲) mark on the inside scale, while the answer of 48.2 kilometers is aligned at the kilometers on the inside scale.

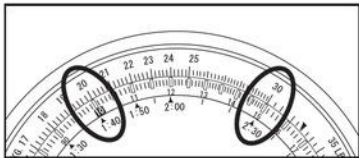


## B. General calculation functions

### 1. Multiplication

**Question:**  $20 \times 15$

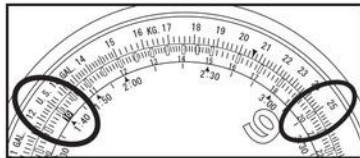
**Solution:** Align 20 on the outside scale with 10 on the inside scale, and read the outside scale at the 30 mark which is aligned with 15 of the inside scale. Figure the number of decimal places, and the answer is 300. Remember: decimal places cannot be read on this scale.



### 2. Division

**Question:**  $250/20$

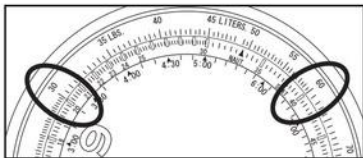
**Solution:** Align 25 on the outside scale with 20 on the inside scale. On the outside scale read the 12.5 mark that is aligned with 10 on the inside scale. Figure the number of decimal places, and the answer is 12.5.



### 3. Reading Ratios

**Question:**  $30/20 = 60/x$

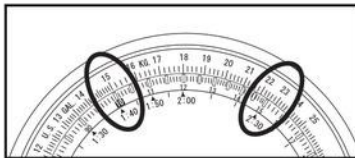
**Solution:** Align 30 on the outside scale with 20 on the inside scale. At this time, the answer of 40 can be read from the inside scale corresponding to 60 on the outside scale. In addition, the ratio of the value on the outside scale to the value on the inside scale is 30:20 at all positions on the scales.



### 4. Determining Square Root

**Question:** What is the square root of 225?

**Solution:** Rotate the scales so that the value on the inside scale corresponding to 22.5 on the outside scale is equal to the value on the outside scale corresponding to  $\sqrt{10}$  on the inside scale, and read off the answer of 15 at that location.



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