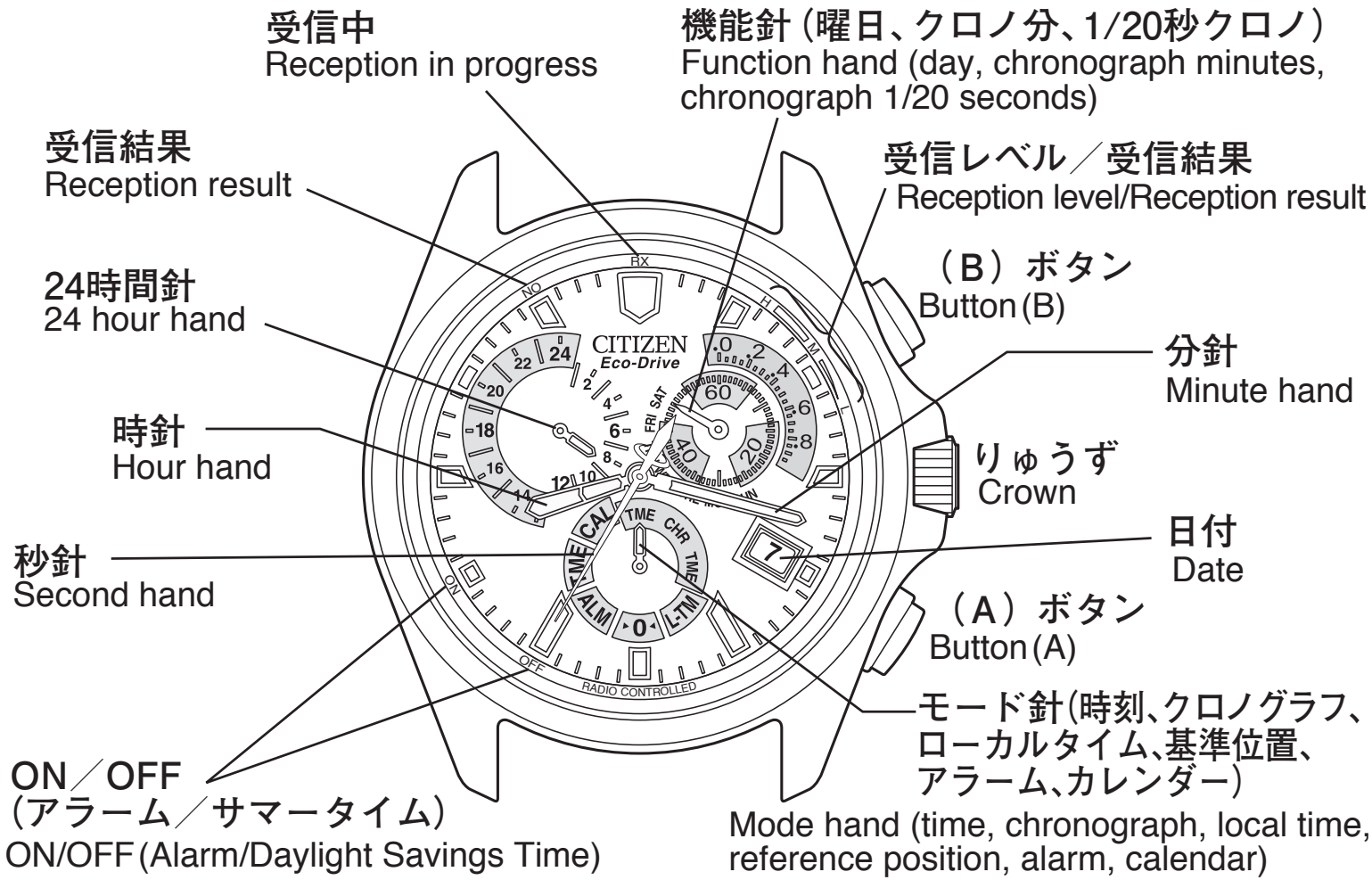
CITIZEN®

取扱説明書



お買い上げいただいた時計と取扱説明書のイラストは異なる場合があります。
The illustrations shown in this manual may differ from the actual watch you have purchased.

この取扱説明書を読む時は左ページの時計図を開いた状態で
お読みください。

When reading this instruction manual please keep the watch diagram at left folded out and in view.

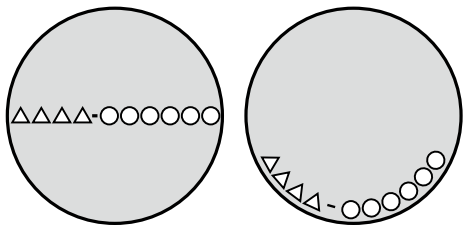
Thank you for your purchase of this Citizen watch.
Before using the watch, read this instruction manual carefully to ensure correct use.
After reading the manual, store it in a safe place for future reference.

Visit the Citizen website (https://www.citizenwatch-global.com/) to view visual guides for operation of your watch. Some models may be equipped with external features (calculation scale, tachymeter, etc.). Visual guides for operation of such external features can also be found on the website.

To check the movement number

A case number–4 alphanumeric characters and 6 or more alphanumeric characters–is engraved on the case back. (Figure on the right)
The first 4 characters of the case number represent the movement number of the watch.
In the example on the right, "△△△△" is the movement number.

<Engraving position example>



The engraving position may differ depending on watch model.

The illustrations shown in this manual may differ from the actual watch you have purchased.

■ This watch is a radio wave watch that receives Japan standard radio waves.

It is equipped with an Automatic Tuning Function that receives radio waves by automatically selecting the station with the strongest signal, a Automatic Reception Function that sets the time and date by automatically receiving radio waves at 2:00 AM or 4:00 AM each day, and a On Demand Reception Function that allows you set the time arbitrarily at any time.

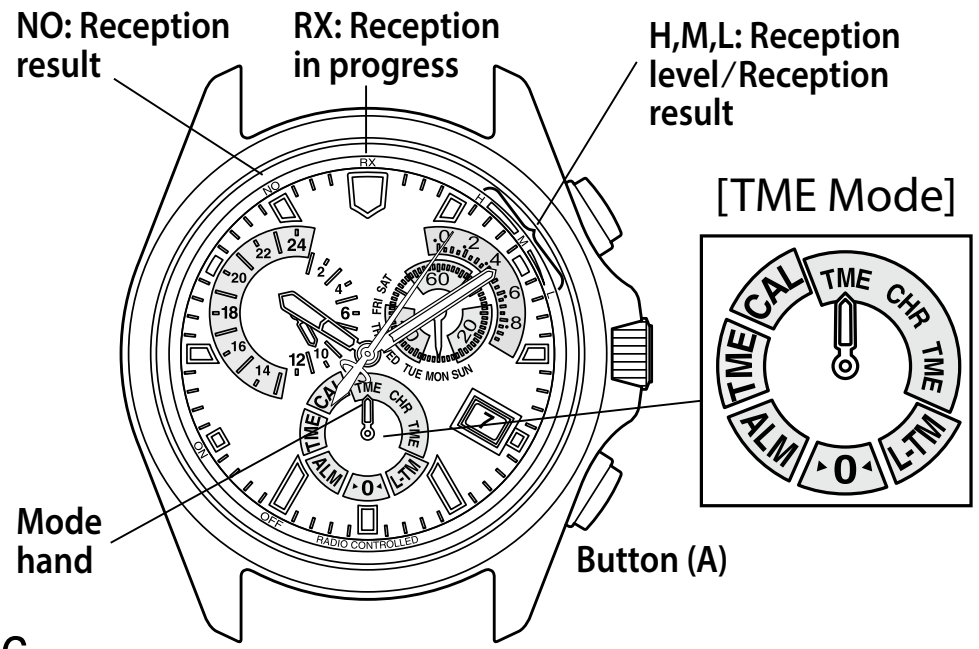
* Standard time waves can only be received in Japan. Radio waves cannot be received overseas. Japan standard radio waves may be received from Japan when using the watch overseas (such as in China or Taiwan). When this happens, use the Local Time Mode that maintains the local time for Japan standard time.

■ Please fully charge your watch before use by exposing it to light.

If the second hand of the watch is moving at 2-second intervals during use, this means that the watch is insufficiently charged. Use the watch after charging by referring to section 14 entitled "General Reference for Solar-Powered Watch Charging Times".
Since the watch may be covered by clothing and so forth particularly during the winter preventing it from being exposed to light, charge the watch once a month by exposing to direct sunlight. In order to ensure that the watch is used comfortably, it is recommended to try to keep the watch charged at all times by storing in a location where it is exposed to sunlight.

■Please check the following before using your watch.

* Set the mode hand to the TME mode.
  (The mode can be switched by pulling the crown out to Position 1. Align the mode hand at one of the three locations of the TME mode. Return the crown to the normal position after switching the mode.)

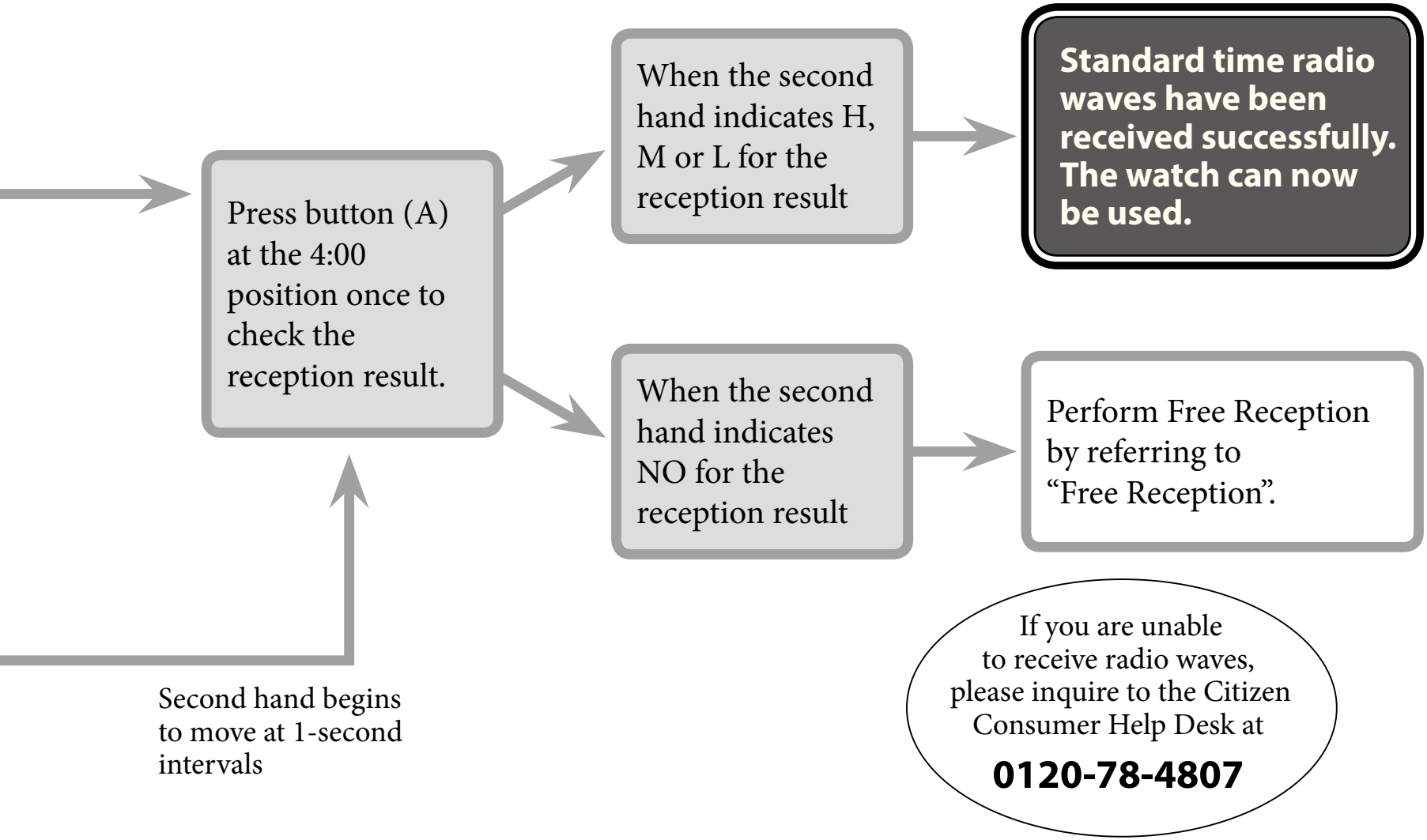


Check the movement of the second hand.

Second hand moving at 1-second intervals

Second hand moving at 2-second intervals or stopped

Charge the watch sufficiently by placing it in direct sunlight as indicated in “Guide to Charging Time”.


Press button (A) at the 4:00 position once to check the reception result.
When the second hand indicates H, M or L for the reception result
Standard time radio waves have been received successfully. The watch can now be used.
When the second hand indicates NO for the reception result
Perform Free Reception by referring to “Free Reception”.
Second hand begins to move at 1-second intervals
If you are unable to receive radio waves, please inquire to the Citizen Consumer Help Desk at
0120-78-4807

■ Please remember the following for receiving standard time radio waves.

- Radio waves are received in the [Time Mode] (TME/3 locations) and [Local Time Mode] (L-TM). Radio waves cannot be received in other modes.

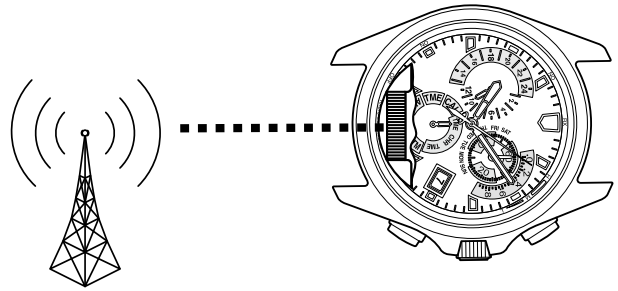
Automatic Reception

The time and date are set by automatically receiving radio waves at 2:00 AM or 4:00 AM each day. (Radio waves are not received at 4:00 AM if they have been received at 2:00 AM.)

On Demand Reception

This function allows radio waves to be received at any time. Use this function when the reception environment has changed and radio waves are unable to be received by Automatic Reception. Do not move the watch while receiving radio waves by On Demand Reception to ensure that they are received properly. (You may have to wait a maximum of 15 minutes for reception to be completed.)

[Reception Procedure]



Take the watch off of your wrist, face the 6:00 position towards the radio wave transmitter station and place the watch in a stable location that allows radio waves to be received easily such as near a window.

- In the case of On Demand Reception, press button (A) located at the 4:00 position for at least 2 seconds. Release your finger after you hear a confirmatory tone and the second hand begins to move to the RX: Reception in progress (12:00) position.
- It is not necessary to press button (A) in the case of Automatic Reception.
- It may be difficult to receive radio waves at sunrise or sunset. Avoid these times when receiving radio waves. Refer to section 4 entitled, “Reception of Radio Waves” for further details on the procedure for receiving radio waves.

[Confirmation of Reception Result]

Confirm the reception result by pressing button (A) located at the 4:00 position after having received radio waves to determine whether radio waves have been successfully received.
If the second hand points to “H, M or L”, this indicates that radio waves have been successfully received. The watch can now be used.
If the second hand points to “NO”, this indicates that radio wave reception has failed.

■Safety precautions (IMPORTANT)

This manual contains instructions that should be strictly followed at all times not only for optimal use, but to prevent any injuries to yourself, other persons or property.

▪ Safety advisories are categorized and depicted in this manual as follows:

⚠**DANGER**	Highly likely to cause death or serious injury.
⚠**WARNING**	Can cause serious injury or death.
⚠**CAUTION**	Can or will cause minor or moderate injury or damage.

▪ Important instructions are categorized and depicted in this manual as follows:

⚠	Warning (caution) symbol followed by instructions that should be followed or precautions that should be observed.
⃠	Warning (caution) symbol followed by prohibited matters.

<**Protective stickers**>

Be sure to remove any protective stickers that may be on your watch (case back, band, clasp, etc.). Otherwise, perspiration or moisture may enter the gaps between the protective stickers and the parts, which may result in a skin rash and/or corrosion of the metal parts.

<Band adjustment>

We recommend seeking the assistance of an experienced watch technician for sizing of your watch. If adjustment is not done correctly, the bracelet may unexpectedly become detached leading to loss of your watch or injury.
Consult an authorized service center.

CONTENTS

1. Features

This watch is a radio wave watch that automatically corrects the time and date by receiving a standard time radio wave (time information) transmitted from radio wave transmitter stations located in Fukushima and Kyushu. It is also an Eco-Drive radio wave watch provided with a photoelectric power generation function that converts light energy into electrical energy to drive the watch. It is also equipped with the features indicated below.

① Chronograph Function
- This function allows timing for up to 59 minutes, 59.95 seconds in 1/20 second units.

② Local Time Function
- This function lets you set the watch to the time in a different country or city.
- Local time can be corrected in 1 hour units.
- You can also switch to daylight savings time.

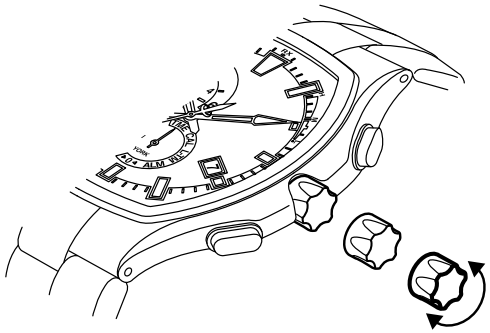
③ Alarm Function
- The alarm time can be set using a 24-hour clock.
- An alarm sounds for 15 seconds when the time reaches the set alarm time.

④ Perpetual Calendar Function
- The date is not required to be corrected until February 28, 2100 (elapsed years from most recent leap year, month, date and day) even if radio waves are not received.

2. Operating the Crown

<Continuously Moving the Hands>

Rapidly turn the crown continuously to the right or left (by two clicks) to continuously move the hands (hour hand, minute hand or second hand). Click the crown once to the right or left to stop the hands from moving.



Rapidly turn the crown continuously (by two clicks).

3. Before Using

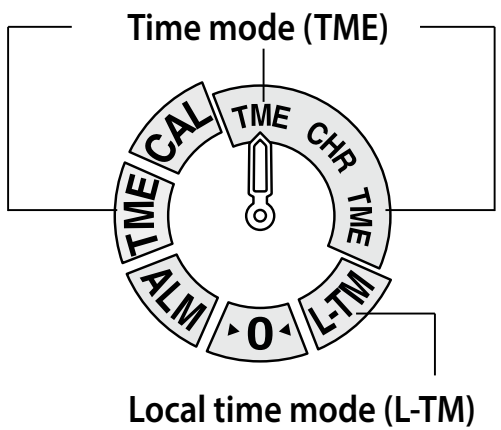
A. Radio Wave Reception Function

<For Good Reception>

This watch incorporates an antenna for receiving radio waves inside the watch case (at the 6:00 position). For good reception, it is recommended to have the 6:00 position of the watch facing in the direction of the radio wave transmitter station when receiving radio waves. The reception level varies depending on the environment in which the watch is used. Try receiving radio waves while changing the orientation or location of the watch while referring to H, M or L that indicates the reception level of the watch. Find the location and direction where radio waves are received easily as indicated by H or M being indicated for the reception level.

[Note]

Modes during which radio waves can be received consist of the [Time Mode] (TME) and [Local Time Mode] (L-TM) shown at three locations on the watch. Please note that radio waves cannot be received in other modes.



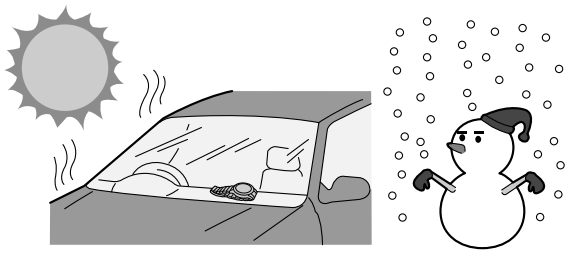
- For proper reception of radio waves, remove the watch from your wrist and place the watch in a stable location that facilitates reception of radio waves such as in front of a window. Do not move the watch during reception.
- Radio waves may be hard to receive due to blockage by metallic objects or the environment. When inside a building and so on, reception should be performed as close to a window as possible.
- When at a location in the Chubu region or Tokai region roughly the same distance from the two transmitter stations (Fukushima and Kyushu stations), the station from which radio waves are received may change automatically, making reception time longer than normal.

<Time Required for Reception>

It takes about 2-13 minutes to receive radio waves. However, if the station from which radio waves are received is changed automatically during the course of radio wave reception, reception may take as long as 15 minutes. The watch may return to the normal display after about 60 seconds due to a poor reception environment that prevents radio waves from being received.

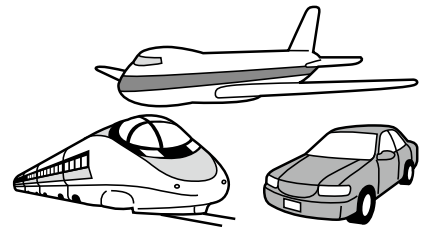
<Locations where Reception may be Difficult>

It may not be possible to properly receive radio waves at the following locations susceptible to generation of radio wave noise or under the following environmental conditions that cause difficulty in receiving radio waves.

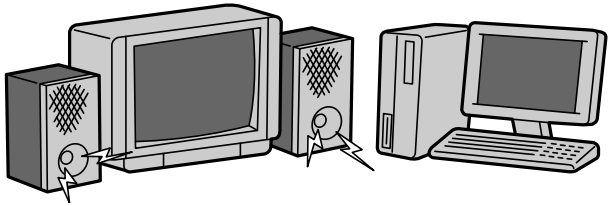


◆ Locations subject to extremely high or low temperatures

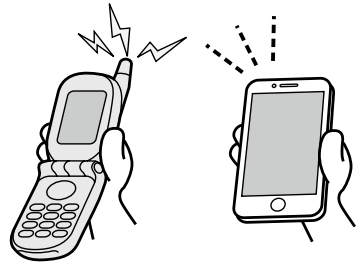
◆ Near high tension wires (power lines), railroad overhead wires or airports (communication facilities)



◆ In a car, train or airplane



◆ Near household electric appliances or OA equipment such as TV sets, refrigerators, personal computers, fax machines, etc.



◆ Near a cellular telephone in use

◆ Inside a reinforced concrete building, between tall buildings or in valleys between mountains or underground

<When signal reception is poor>

High-tension electrical lines or other structures near your house may block the path to the signal station.
This may result in a poor environment for receiving the time signal. With reference to pages 128 to 129, search for a better place for reception.
Then, attempt to receive the time signal following the procedure on page 163.

- If the window contains a wire netting in it, open the window or change the location for better reception.

Contact the Citizen Consumer Help Desk (TEL: 0120-78-4807).

4. Reception of Radio Waves

There are three modes for receiving radio waves consisting of Automatic Reception, On Demand Reception and Recovery Automatic Reception. The time and date corrected automatically when radio waves have been properly received. When reception is completed, each hand displays the received time.
[Note] Do not move the watch until reception is completed.

1. Automatic Reception

- Radio waves are received automatically at 2:00 AM or 4:00 AM. (Radio waves are not received at 4:00 AM if they have been received at 2:00 AM.)

(1) When receiving radio waves, remove the watch from your wrist and place it in a stable location where radio waves can be received easily such as by a window with the 6:00 position of the watch facing in the direction of the radio wave transmitter station.
(2) After the second hand has moved to RX: Reception in progress, it moves to H, M or L indicating that reception is level after which the watch begins to receive radio waves.

(3) When reception is completed, the second hand automatically moves from H, M or L to display the correct time.

2. On Demand Reception

• On Demand Reception lets you receive radio waves at any time.

(1) When receiving radio waves, remove the watch from your wrist and place it in a stable location where radio waves can be received easily such as by a window with the 6:00 position of the watch facing in the direction of the radio wave transmitter station.

(2) Press button (A) located at the 4:00 position for about 2 seconds or more, and release the button after confirming that the watch has emitted a confirmatory tone and the second hand has moved to RX: Reception in progress (12:00). The remainder of the procedure is the same as that described in steps (2) and (3) for Automatic Reception (previous page).

<Tone Indicating Completion of On Demand Reception>

- When reception has been successful, a beeping tone sounds twice, and the time is corrected to the correct time.
- When reception has failed, a beeping tone sounds once, and the time returns to the time displayed before radio wave reception.

3. Recovery Automatic Reception

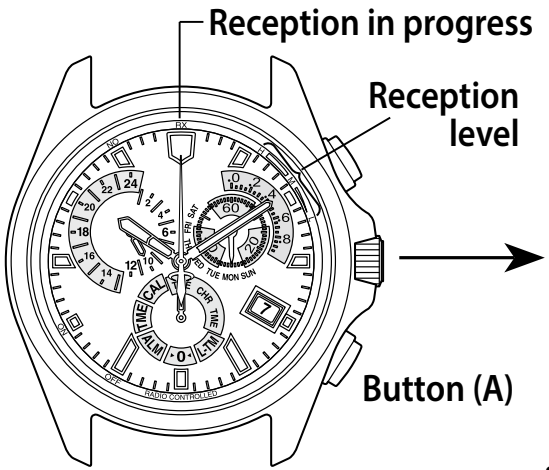
- When the watch has stopped as a result of being insufficiently charged, radio waves are received once automatically. However, charge the watch by placing under direct sunlight for about 30 minutes to allow it to perform Recovery Automatic Reception. Try to keep the watch charged at all times so that it does not become insufficiently charged.

* When the watch is receiving the radio wave signal, all of the hands will stop. To check the time, hold button (A) for 2 seconds to cancel radio wave reception. The hands will then return to the current time.

A. Position of the Second Hand During Reception

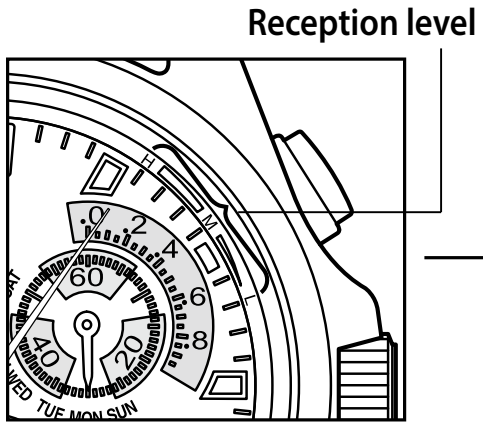
(Movement of Second Hand from Start of Reception to Completion)

[Reception in progress]



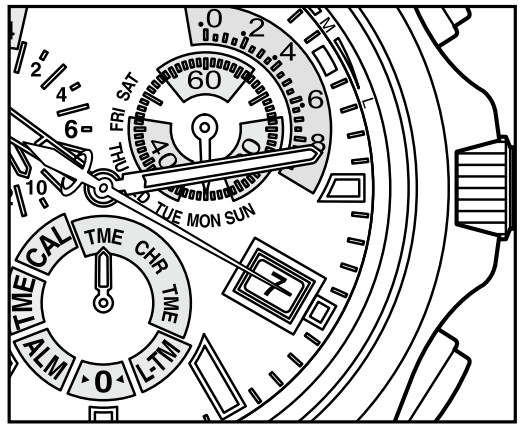
- Second hand moves to RX and stops

[Reception Level]



- Second hand indicates a reception level (H, M or L). Although the second hand may rotate during reception to correct the time, this does not indicate that reception has been completed.

[Completion of Reception]



- If reception has been successful, the second hand returns to one-second interval movement, and each hand is automatically corrected to the correct time. Never move the watch until the second hand returns to one-second interval movement.

B. Confirmation of Reception Result

- When button (A) is pressed once, the second hand moves to H, M, L or NO enabling you to confirm the reception result.

[Note] Since the second hand moves to the 12:00 position and On Demand Reception begins if button (A) is depressed continuously for 2 seconds or more, do not press button (A) for 2 seconds or more when confirming the reception result. If On Demand Reception has inadvertently been started by pressing button (A) for 2 seconds or more, press button (A) again for 2 seconds to cancel radio wave reception.

- The reception result is indicated for 10 seconds after which the watch automatically returns to the current time. In addition, the watch can also be returned to the current time by pressing button (A) while the reception result is indicated.

C. Reception Level and Reception Result

- During the time radio waves are being received, the second hand waits at the reception position corresponding to the reception state to indicate the reception level. Following reception, the reception result can be confirmed by pressing button (A) once.

H, M and L indicate the reception level, and have no effect on performance.

Reception level	Reception level and reception status
H	Radio wave was received or is being received under very good reception conditions.
M	Radio wave was received or is being received under good reception conditions.
L	Radio wave was received or is being received under not very good reception conditions.
NO	When reception has failed

(The time display may shift slightly depending on the reception environment and internal watch processing even if radio waves are properly received.).

D. General Reference for Receiving Areas

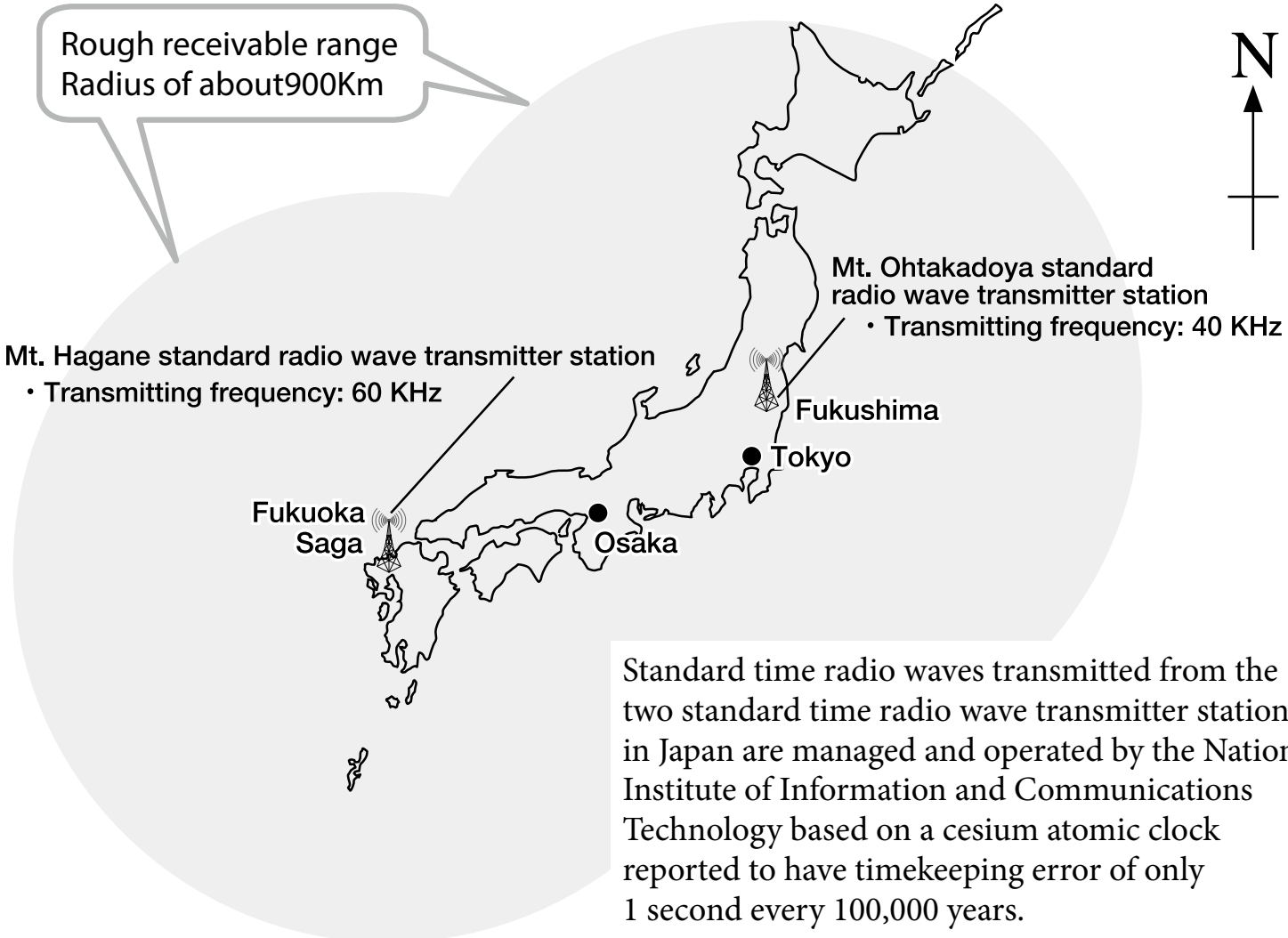
This watch is provided with an automatic transmitter station selection feature that automatically selects the station to be used for reception of standard time radio waves. These areas may vary due to changes in reception status depending on the time zone, seasonal variations and weather. Since this map only provides a general reference of the standard receiving areas, it may not apply in some particular locations even within the range shown in the map.

<Radio wave transmitter station>

- Mt. Ohtakadoya standard radio wave transmitter station (Fukushima Station)
- Mt. Hagane standard radio wave transmitter station (Kyushu Station)

The time signal is broadcast almost continuously 24-hours a day, but may occasionally be interrupted due to maintenance. The broadcasting conditions of the time signal can be checked on the English web site of Japan Standard Time Project (http://jjy.nict.go.jp/index-e.html).

The time signal has no effect on the human body or medical equipment.



Standard time radio waves transmitted from the two standard time radio wave transmitter stations in Japan are managed and operated by the National Institute of Information and Communications Technology based on a cesium atomic clock reported to have timekeeping error of only 1 second every 100,000 years.

5. List of Functions Assigned to Mode Hand

Name	Crown position	TME (*1)	CHR
Function hand	Normal position	Displays day	Stops at chronograph 0 minutes position
	Position 1		
	Position 2		
Date	Normal position	Displays date	Displays date
	Position 1		
	Position 2		
Hour hand/ minute hand	Normal position	Displays hours/minutes	Displays hours/minutes
	Position 1		
	Position 2		

Please read this section while referring to the watch illustration found at the beginning of this manual. *1: The same time is displayed at three locations of the TME mode.

L-TM	▶0◀	ALM	CAL
Displays day of local time	Stops at chronograph 30 seconds position	Stops at chronograph 0 minutes position	Displays day
Displays date of local time	Displays 31/1	Displays date	Displays date
Displays hours/ minutes of local time	Stops at 12:00 position	Displays alarm hours/minutes	Displays hours/ minutes

*1: The same time is displayed at three locations of the TME mode.

Name	Crown position	TME (*1)	CHR
Second hand	Normal position	Displays seconds	Stops at 0 position
	Position 1	Mode switching (stops at 30 seconds position)	Mode switching (stops at 30 seconds position)
	Position 2	Displays seconds	Stops at 0 position
24 hour hand	Normal position	Displays time (24 hour clock)	Displays time (24 hour clock)
	Position 1		
	Position 2		

L-TM	▶0◀	ALM	CAL
Displays seconds	Stops at 12:00 position	Displays alarm ON/OFF	Displays elapsed years/month
Mode switching (stops at 30 seconds position)	Mode switching (stops at 30 seconds position)	Mode switching (stops at 30 seconds position)	Mode switching (stops at 30 seconds position)
Displays daylight savings time ON/OFF	Stops at 12:00 position	Displays alarm ON/OFF	Displays elapsed years/month
Displays local time (24 hour clock)	Stops at 24:00 position	Displays alarm time (24 hour clock)	Displays time (24 hour clock)

*1: The same time is displayed at three locations of the TME mode.

Name	Crown position	TME (*1)	CHR
Button (A)	Normal position	Reception result/ Reception in progress	Displays 1/20 seconds when chronograph stopped
	Position 1	No change	No change
	Position 2	Zeroes second hand to 12:00 position	
Button (B)	Normal position	No change	Start/stop/reset
	Position 1		No change
	Position 2	Zeroes second hand to 12:00 position	
Crown	Normal position	No change	No change
	Position 1	Mode switching	Mode switching
	Position 2	Time correction	No change

L-TM	▶0◀	ALM	CAL
Reception result/ Reception in progress	No change	Alarm tone monitor	No change
No change		No change	
Confirms whether daylight savings time ON/OFF	No change	Switches alarm ON/OFF	No change
Switches daylight savings time ON/OFF	Selects location for reference position correction		Selects location for date correction
No change	No change	No change	No change
Mode switching	Mode switching	Mode switching	Mode switching
Local time correction	Reference position correction	Alarm time correction	Date correction

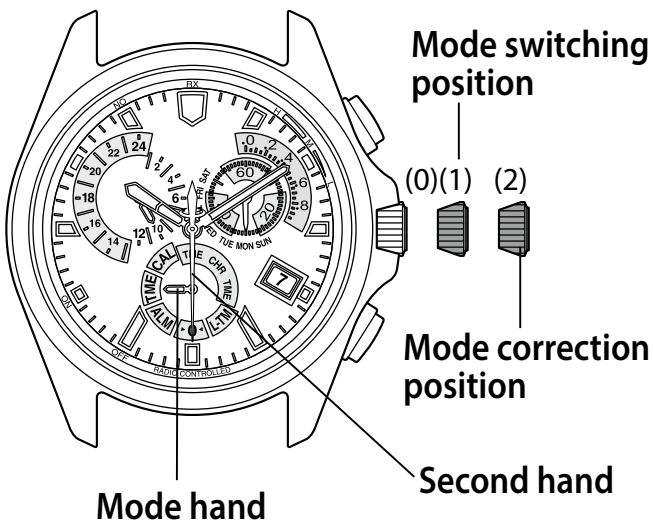
6. Switching the Mode

- This watch is equipped with six modes consisting of a time (displayed at three locations), chronograph, local time, reference position, alarm and calendar mode.
- The same time is displayed at all three locations in the time (TME) mode.

<Procedure for Switching the Mode>

When the crown is pulled out to Position 1 (mode switching position), the second hand advances (clockwise rotation) and stops at the 30 second position.
If the second hand does not stop at the 30 seconds position, refer to the section entitled, “Checking and Correcting the Reference Position” and correct the reference position.

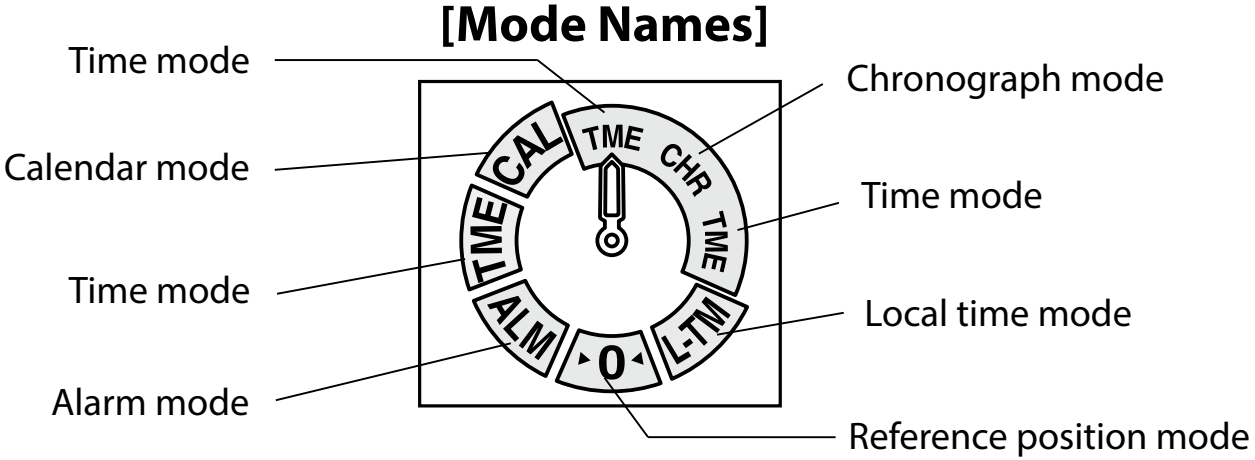
(1) Turn the crown and align the mode hand at each mode.
  - The mode hand can be aligned by turning the crown to the right or left. Each mode can be selected by moving the mode hand.



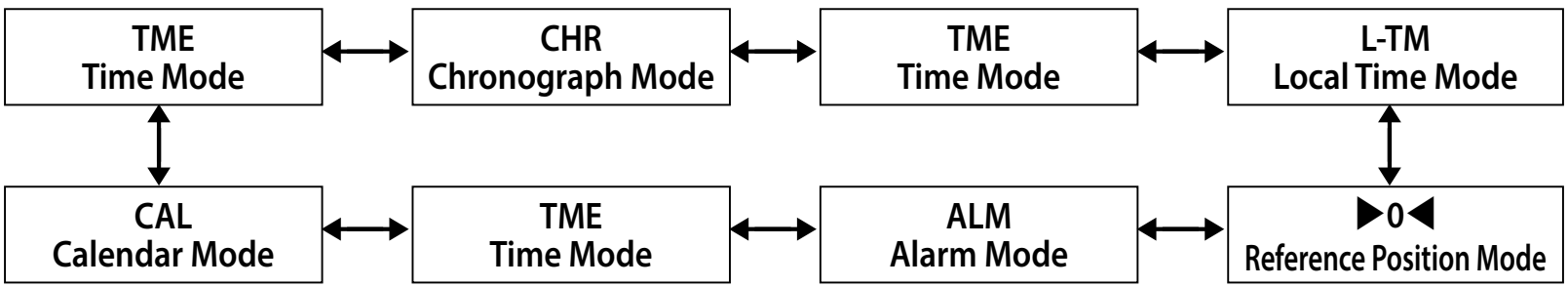
(2) Pull the crown out further to Position 2 (mode correction position) to enter the correction state of each mode.

• Read the correction procedures for each mode for details on correcting each mode.

[Mode Names]



[Switching the Mode]



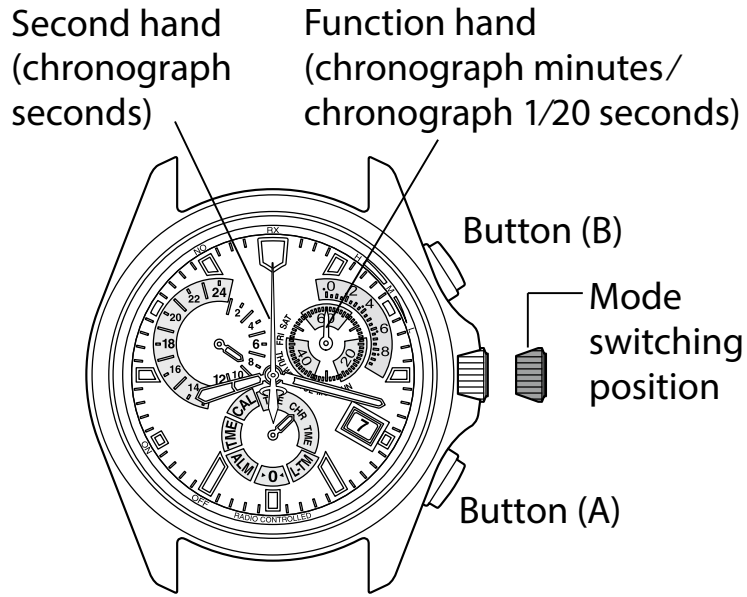
7. Using the Chronograph

- The chronograph is able to measure time up to 59 minutes 59.95 seconds in 1/20 second units. It is reset to 0 after timing.

<Meanings of Hands When Timing with the Chronograph>

Pull the crown out to Position 1 and then turn the crown to align the mode hand at [CHR] (chronograph). Then return the crown to the normal position.

- The second hand and function hand is rapidly advanced to the 0 position and the watch enters the chronograph mode.
- The second hand changes to the chronograph second hand and is rapidly advanced by one revolution only when starting timing at 0 seconds. It then moves at one-second intervals to measure chronograph seconds.

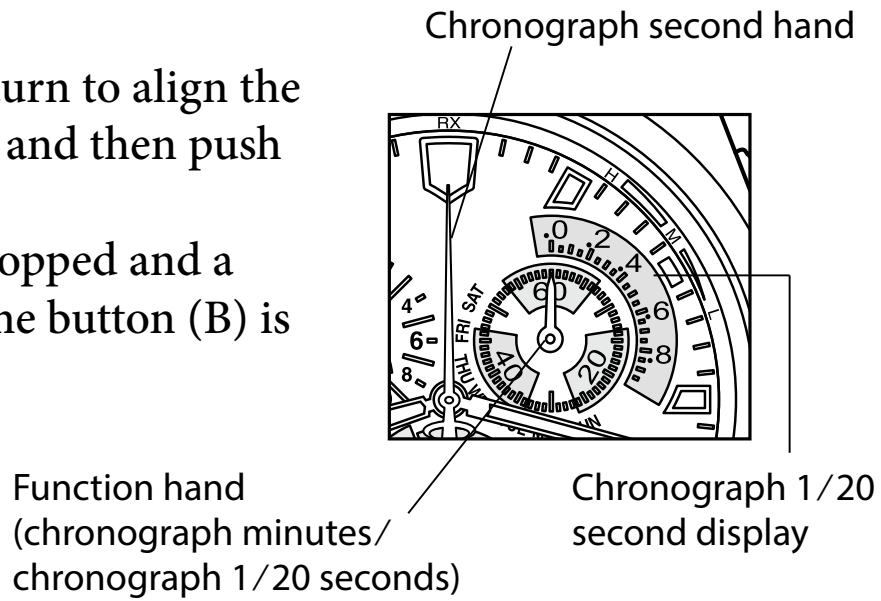


- The function hand changes to chronograph minutes or chronograph 1/20 seconds.
- It moves at one minute intervals to measure chronograph minutes.
- When button (A) is pressed to start the chronograph, it displays time in 1/20 chronograph seconds for as long as it is pressed.
- The hour and minute hands may display the mode prior to switching the mode when the watch has been switched from another mode to the chronograph mode.

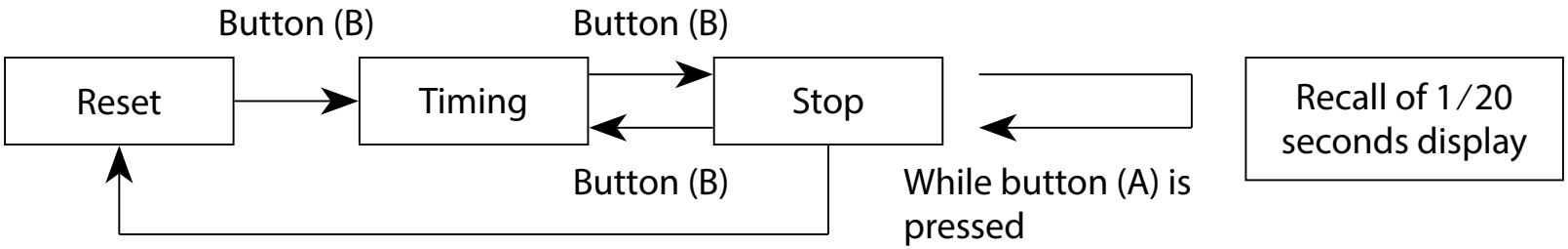
<Chronograph Timing>

Pull the crown out to Position 1 and turn to align the mode hand at [CHR] (chronograph), and then push it in to the normal position.

(1) The chronograph is started and stopped and a confirmatory tone sounds each time button (B) is pressed.



(2) If button (A) is pressed while the chronograph is stopped, the function hand displays the time in chronograph 1/20 seconds for as long as it is pressed. Releasing button (A) returns the function hand to displaying chronograph minutes.
(3) If button (B) is depressed continuously while the chronograph is stopped, the hands are reset to the 0 position.



8. Setting Local Time and Daylight Savings Time

- The local time function lets you set the watch to a time in a different area from the time set in the time mode [TME].
- Time corrections (time difference) can be made in 1 hour units.
- The local time can be set over a range of +3 to -20 hours based on the time mode [TME].
- Daylight savings time can also be set. The time in this case can be set over a range of +4 to -19 hours.

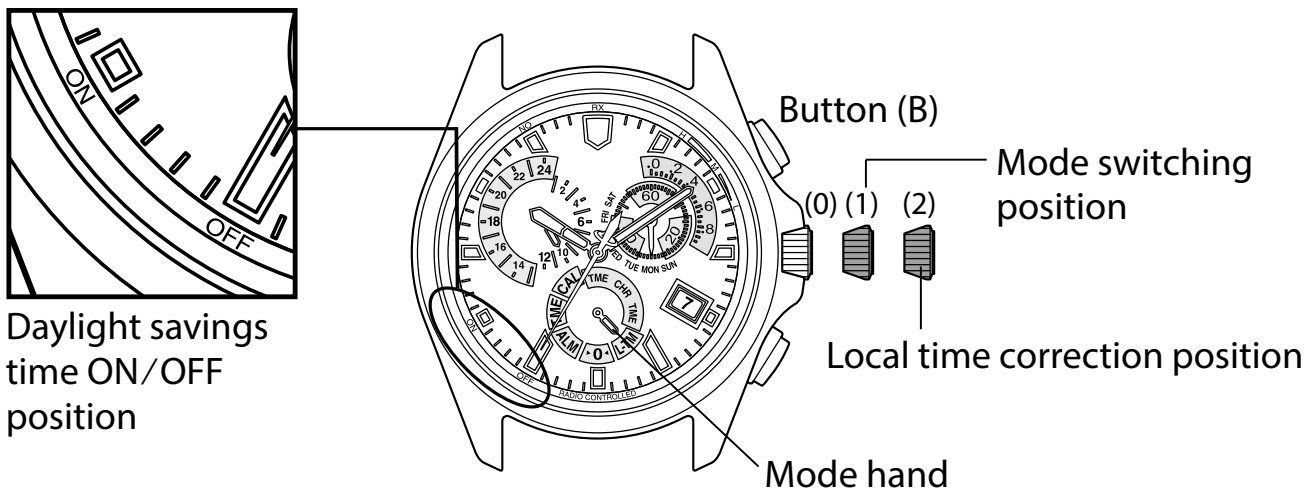
[Note] The set time is not displayed correctly if the local time has been set outside the above ranges.

<Procedure for Setting Local Time>

Pull the crown out to Position 1 and turn to align the mode hand to [L-TM] (local time).

(1) Pull the crown out to Position 2 (local time correction position).

- The second hand turns continuously and stops at the daylight savings time ON or OFF position.



(2) Turn the crown to set the hour and minute hands to the local time.

① Turning the crown to the right (by 1 click) causes the hour and minute hands and the 24 hour hand to advance by 1 hour.

② Turning the crown to the left (by 1 click) causes the hour and minute hands and 24 hour hand to go back by 1 hour.

- Turning the crown continuously (rapidly by 2 clicks or more) causes the hour and minute hands and the 24 hour hand to move continuously.
- Turn the crown to the left or right to interrupt continuous movement of the hands.
- The date and day also change corresponding to the calendar and local time.

[Note] Set the local time correctly by checking AM and PM with the 24 hour hand.

(3) Return the crown to the normal position. This completes the procedure for correcting the local time.

- The calendar is updated to the date and day corresponding to the local time.

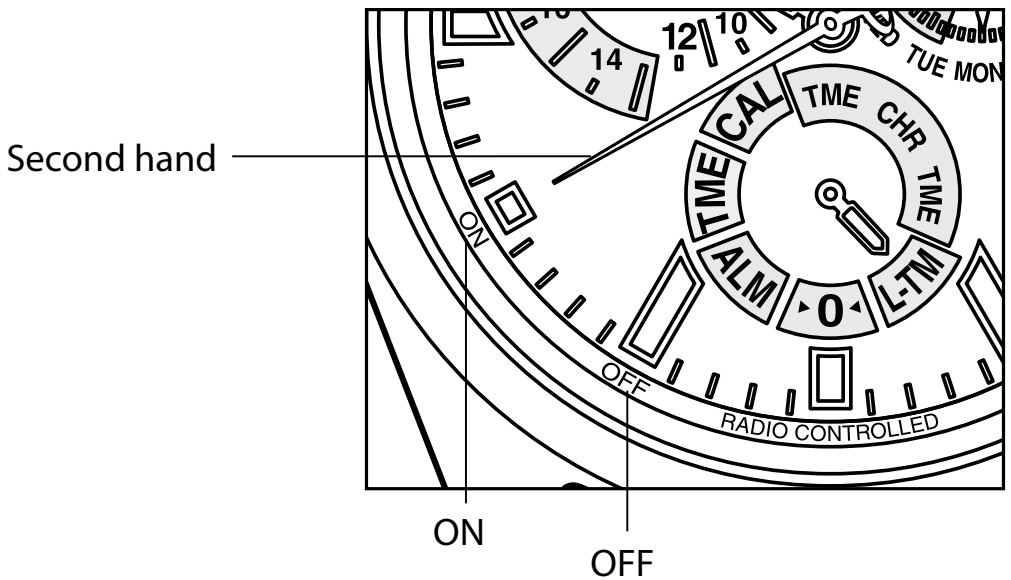
<Procedure for Setting Daylight Savings Time>

This watch can also be set to daylight savings time (while local time is already displayed).

(1) Pull the crown out to Position 2 (local time correction position).

- The second turns continuously, and then stops at the daylight savings time ON or OFF position.

[Daylight Savings Time ON/OFF Setting]



(2) Press button (B) to change the daylight savings time setting.
- Each time button (B) is pressed, a confirmatory tone sounds and ON or OFF can be selected for daylight savings time. The time advances by 1 hour if daylight savings time has been set to ON.

(3) Return the crown to the normal position. This completes the procedure for setting daylight savings time.

<Checking Daylight Savings Time ON/OFF Setting>

The daylight savings time setting is displayed for 10 seconds as either ON or OFF when the crown is returned to the normal position or when button (B) is pressed while the crown is at Position 1 in the local time mode (L-TM).

- The second hand indicates ON when daylight savings time has been set.
- The second hand indicates OFF when daylight savings time has not been set.

9. Using the Alarm

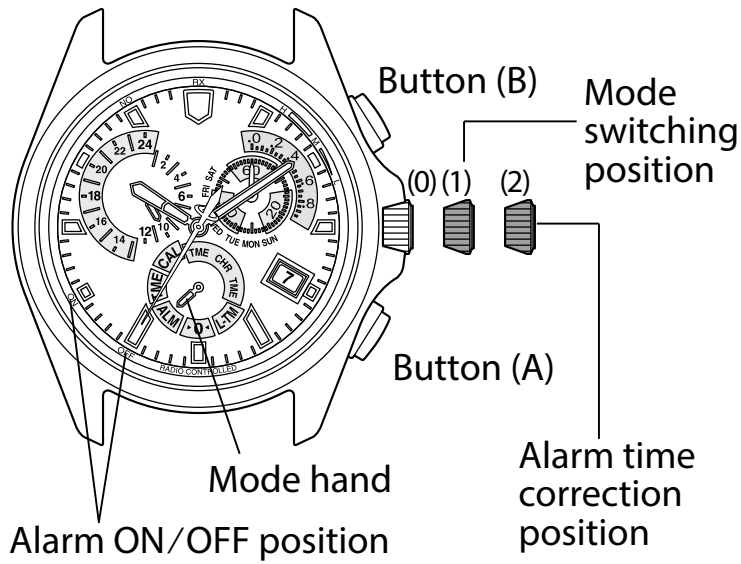
- The alarm function uses a 24 hour clock. Once the alarm has been set, the alarm sounds for 15 seconds when the set time is reached once a day.
- The alarm can be used in the time mode as well as the local time and calendar modes. The alarm does not sound when the watch is in another mode. Furthermore, press button (A) or (B) to stop the alarm tone from sounding before 15 seconds have elapsed.

<Setting the Alarm Time>

Pull the crown out to Position 1 and turn to align the mode hand at [ALM] (alarm).

- The hour hand and minute hand display the previously set alarm time.

(1) When the crown is pulled out to Position 2 (alarm time correction position), the second hand stops at the ON or OFF position.



- Press button (B) to move the second hand to the alarm ON position.
- Each time button (B) is pressed, a confirmatory tone sounds and the alarm setting switches between ON and OFF.

  The setting can be changed while the crown is in the normal position or when pulled out to Position 1.

(2) Turn the crown to set the correct alarm time while checking AM and PM with the 24 hour hand.

①Turning the crown to the right (by 1 click) causes the minute hand and hour hand to advance by 1 minute.

②Turning the crown to the left (by 1 click) causes the minute hand and hour hand to go back by 1 minute.

- Turning the crown continuously (rapidly by 2 clicks or more) causes the hour and minute hands to move continuously.
- Turn the crown to the left or right to interrupt continuous movement of the hands.

(3) Push in the crown to Position 1 to return the watch to previously used mode.

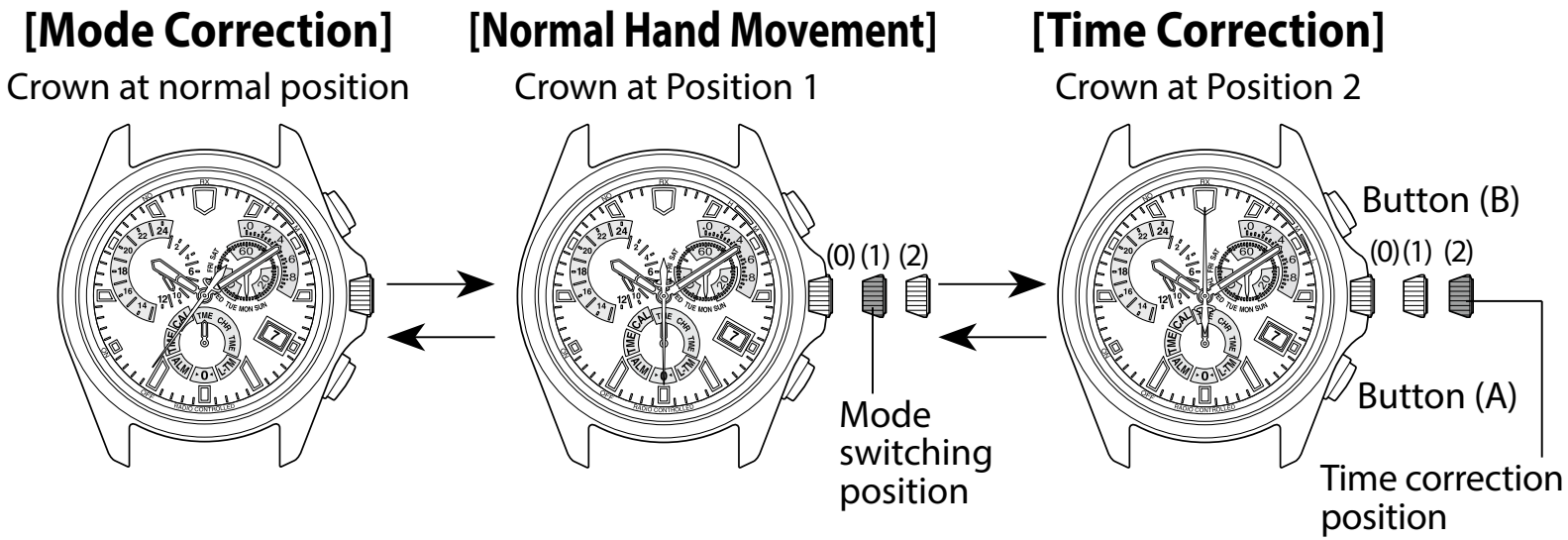
(4) Return the crown to the normal position. This completes the procedure for setting the alarm time.

10. Manually Setting the Time and Date

A. Setting the Time

(The same time is displayed at the three locations of the TME mode. It is only necessary to set the time at one of these locations.)

- The time and date can be set manually when radio waves are unable to be received. Take the watch off your wrist in order to set the correct time.



<Time Correction Procedure>

Pull the crown out to Position 1 and turn to align the mode hand at [TME] (time).

(1) Pull the crown out to Position 2 (time correction position).
- The second hand turns continuously at one second intervals to display the current time.

(2) Press button (A) or (B) once while the second hand is moving at one second intervals.
- When either button is pressed once, the second hand advances (clockwise direction) to the 0 seconds position and stops.

(3) Turn the crown to align the minute hand, hour hand and 24 hour hand to the current time.
①Turning the crown to the right (by one click) causes the minute hand, hour hand and 24 hour hand to advance by one minute.
②Turning the crown to the left (by one click) causes the minute hand, hour hand and 24 hour hand to go back by one minute.
- Turning the crown continuously (by two clicks or more) causes the minute hand, hour hand and 24 hour hand to move continuously.
- Turn the crown to the left or right to interrupt continuous movement of the hands.
- Check AM and PM with the 24 hour hand to set the time correctly.

(4) Return the crown to the normal position in synchronization with a telephone time signal or other time service.

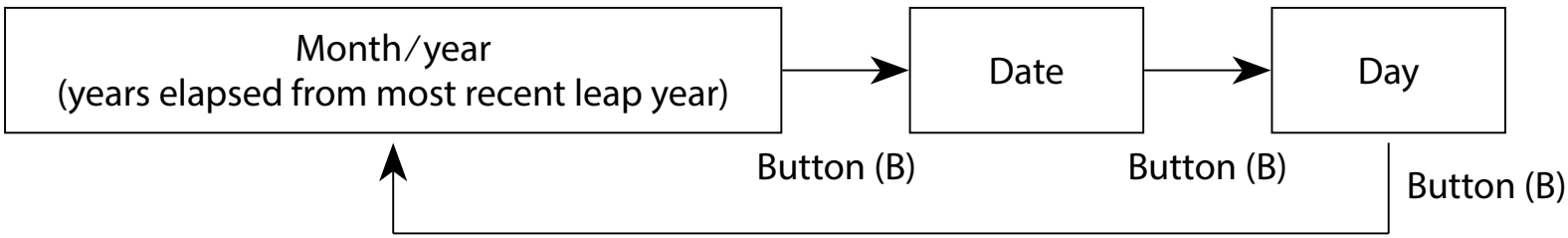
B. Setting the Date

• This watch is equipped with a perpetual calendar that changes the year, month, date and day automatically until February 28, 2100 once the date has been set.

<Changing the Corrected Location>

Each time button (B) is pressed, the corrected location changes repeatedly in the order of Month/leap year (no. of years elapsed from most recent leap year) → Date → Day.

[Change in Corrected Location]

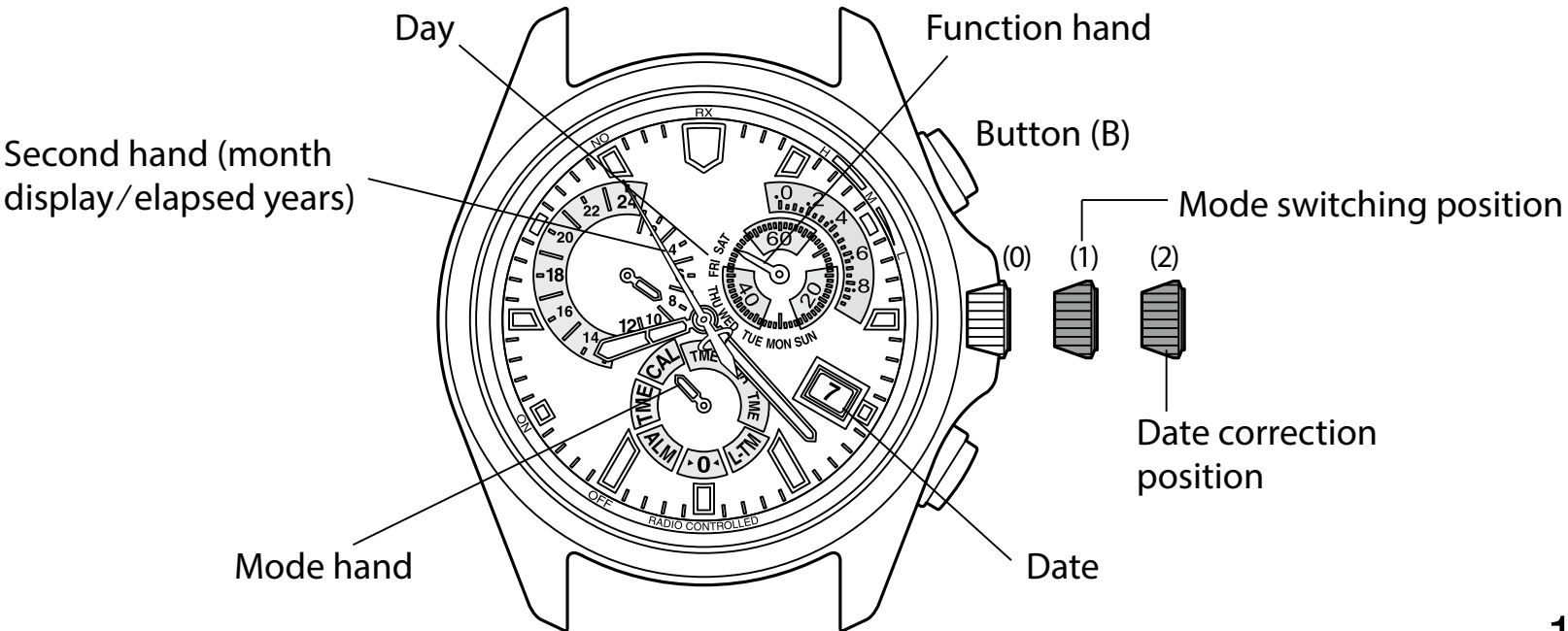


<Date Correction Procedure>

Pull the crown out to Position 1 and turn the crown to align the mode hand at CAL (calendar).

(1) Pull the crown out to Position 2 (date correction position).

- After the second hand begins to move continuously, it moves to the month display/position of the number of years elapsed from the most recent year and stops, indicating that the watch is in the month/year correction mode.



(2) Turn the crown to the right to align the second hand at the month and number of years elapsed from the most recent leap year. The second hand cannot be aligned by turning the crown to the left.

①Turn the crown to the right (by one click) to align the second hand at the position corresponding to the month and number of years elapsed from the most recent leap year.

<Reading the Month and No. of Elapsed Years>

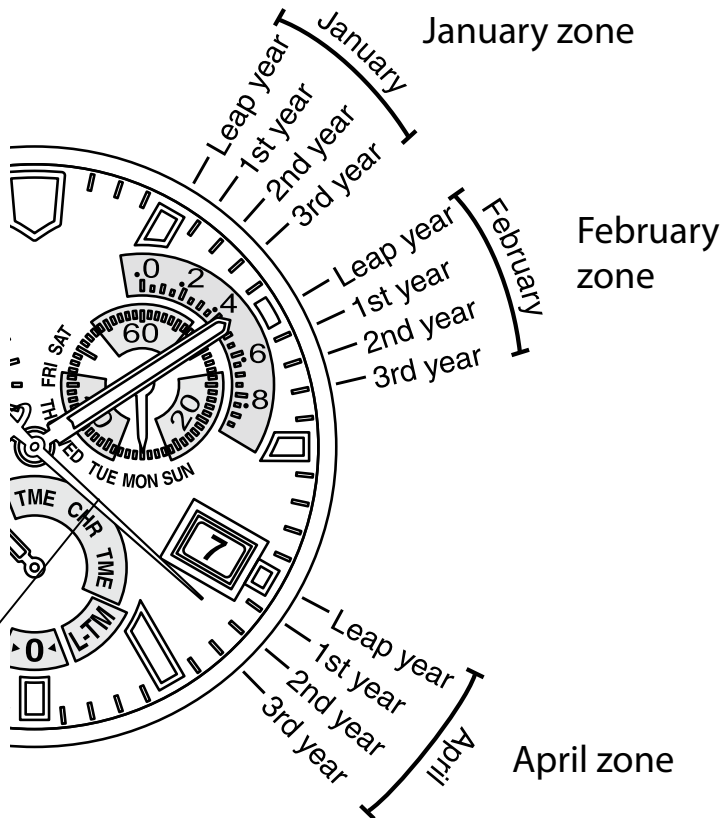
[Reading the Month]

January zone: Between 1:00 and 2:00

February zone: Between 2:00 and 3:00

⋮

December zone: Between 12:00 and 1:00



[Reading the Number of Elapsed Years]

Leap year: Starting point of each month zone

1st year after most recent leap year: 1st graduation of each month zone

2nd year after most recent leap year: 2nd graduation of each month zone

3rd year after most recent leap year: 3rd graduation of each month zone

<Quick Reference Chart for Number of Years Since Leap Year>

Elapsed year	Year
Leap year	**— , 2020 , 2024**
1st year	**— , 2021 , 2025**
2nd year	**— , 2022 , 2026**
3rd year	**2019 , 2023 , 2027**

Examples:

- January of current leap year: Align the second hand to the 5 seconds position.
- April of 3rd year from most recent leap year: Align the second hand to the 23 seconds position.

(3) Press button (B).

- The function hand moves back and forth for one revolution after which the watch enters the date correction mode.

(4) Turn the crown to the set the date.

①When the crown is turned to the right (by one click), the function hand makes five revolutions in the clockwise direction and the date advances by one day.

②When the crown is turned to the left (by one click), the function hand makes five revolutions in the counter-clockwise direction and the date goes back by one day.

- Turning the crown continuously (by two clicks or more) causes the date to be corrected continuously.
- Turn the crown to the left or right to interrupt continuous correction of the date.

(5) Press button (B).

- The function hand moves back and forth for half a revolution and stops at the day position indicating that the watch is in the day correction mode.

(6) Turn the crown to set the day.

①Turning the crown o the right (by one click) causes the day to change in the order of SUN → MON → ···· FRI → SAT and then back to SUN.

②Turning the crown to the left changes the day in the reverse order of SUN → SAT → ···· TUE → MON and then back to SUN.

(7) Return the crown to the normal position. This completes the correction procedure.

<Setting to a Non-Existent Date>

The date is automatically changed to the first day of the following month when the crown is returned to the normal position from the date correction mode. The date is displayed as shown below if the date should happen to be mistakenly set to a non-existent date.

Examples: Regular year: February 29, 30 or 31 → March 1
Regular year: April 31 → May 1
Leap year: February 30 or 31 → March 1
Furthermore, since the set day will be displayed for the day, correct the day as necessary.

11. Checking and Correcting the Reference Position

The reference position may shift if the watch is placed in environment in which it is subject to strong impacts or magnetism from the outside. If the watch is used while shifted from the reference position, the time, calendar, alarm and other modes will not function properly. If this happens, check the reference position and correct as necessary.

A. Checking the Reference Position

(1) Pull the crown out to Position 1 and align the mode hand at ▶ 0 ◀ (reference position).

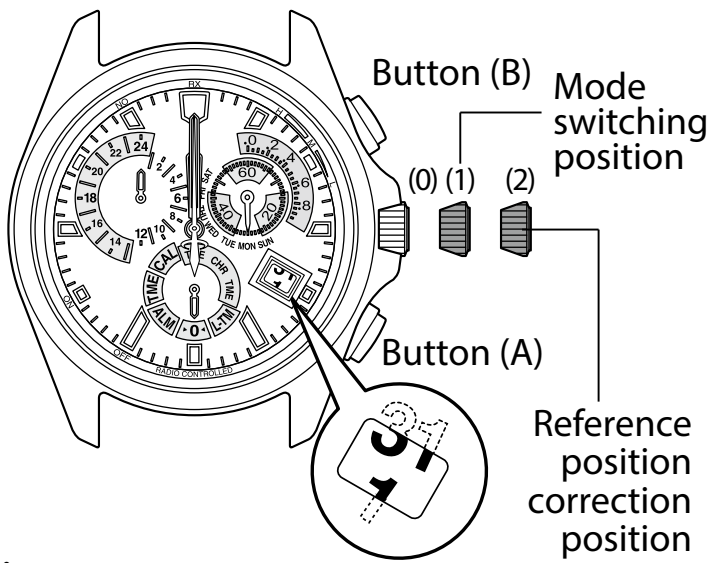
- The second hand advances (clockwise direction) to the 30 seconds position.
- The 24 hour hand, hour hand and minute hand move forward (clockwise) or backward (counter-clockwise) to the reference position (0 hours 0 minutes 0 seconds) and stop.
- The date displays an intermediate location between the 31st and 1st, and the function hand moves to MON and stops.

(2) Return the crown to the normal position.

- The second hand moves to the reference position (0:00) and stops.

If the reference positions of each hand are properly displayed as described above, pull the crown out to Position 1, turn it and return the watch to the mode in which is was previously being used.

[Correct Reference Position of Each Hand]



<Reference Position of Each Hand>

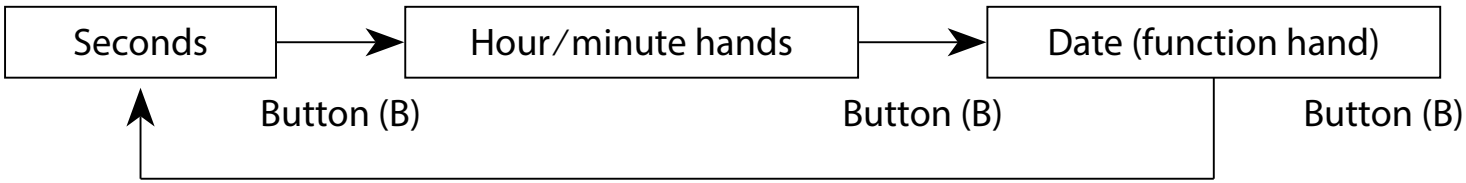
- 24 hour hand: 24 hours 0 minutes
- Hour hand, minute hand: 0 hours 0 minutes
- Second hand: 0 seconds
- Function hand: MON
- Date: Between 31st and 1st

* If the display of the watch is not as shown above, perform Reference Position Correction described in the following section.

B. Correcting the Reference Position

• The reference position is corrected by repeating correction for each parameter in the order of seconds → hour/minute hands → date (function hand turns) each time button (B) is pressed.

[Change in Corrected Location]



Pull the crown out to Position 1 and turn to align the mode hand at ▶0◀ (reference position). When the crown is then pulled out to Position 2, the second hand turns continuously in the clockwise direction and then stops to indicate that the watch has entered the reference position correction mode.

(1) Turn the crown to align the second hand at the reference position (0 hours).

① Turning the crown to the right (by one click) causes the second hand to advance by one second.

- Turning the crown continuously (rapidly by two clicks or more) causes the second hand to move continuously.
- Turn the crown to the left or right to interrupt continuous movement of the second hand.
- The second hand cannot be aligned at the reference position by turning the crown to the left.

(2) Press button (B).
- After the hour and minute hands move back and forth, the hour hand and minute hand enter the correction mode.

(3) Turn the crown to align the hour hand and minute hand at “0 hours 0 minutes”.
Since the 24 hour hand moves in coordination with the hour hand, align the 24 hour hand at 24 hours (12:00 AM).

① Turning the crown to the right (by one click) causes the minute hand to advance by 1/4 minute (turning by four clicks causes it to advance by one minute).

② Turn the crown to the left (by one click) to turn back the minute hand by 1/4 minute (turning by four clicks causes it to go back by one minute).
- Turning the crown continuously (rapidly by two clicks or more) causes the hour hand and minute hand to move continuously.
- Turn the crown to the left or right to interrupt continuous movement of the hands.

(4) Press button (B).
- The function hand moves back and forth and then enters the date correction mode.

(5) Turn the crown to rotate the function hand and align the date between the 31st and 1st, and then turn the crown to align the function hand at MON.

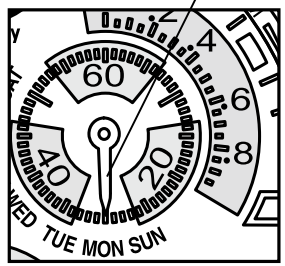
① Turn the crown continuously to the right (rapidly by two clicks or more).
- The function hand makes five revolutions in the clockwise direction and the date changes to the 1st.

② Continuous to rotate the function hand until the date reaches the 31st.

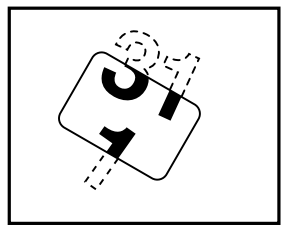
③ Turn the crown to the left or right by one click to interrupt movement of the function hand when the date has changed to the 31st.

④ Rotate the function hand while turning the crown to the right one click at a time, and after confirming that the date has reached an intermediate location between the 1st and 31st, always make sure to then align the function hand at the MON position.

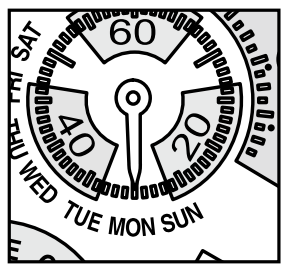
Date changes to the 1st after the function hand makes five revolutions



[Position of Date Display]



[Position of Function Hand]



(6) Return the crown to the normal position. This completes the reference position correction procedure.

- After correcting the reference position, always make sure to set the mode to the TME (time) mode and reset the watch to the correct time by On Demand Reception.

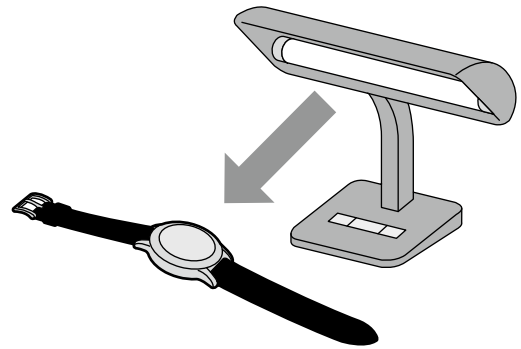
12. Photoelectric Power Generation Function

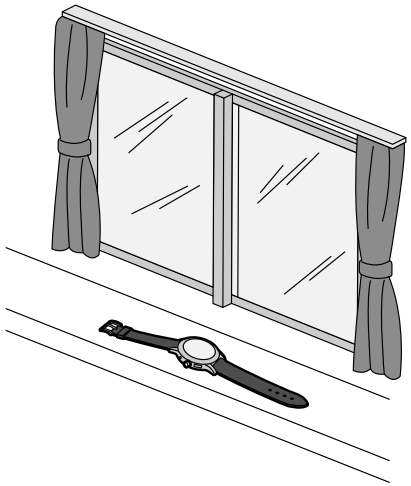
This watch uses a rechargeable cell to store electrical energy. Once fully charged, the watch will continue to keep the correct time for about 6 months. If storing your watch in a location where it is not exposed to light, it is recommended to sufficiently charge the watch before storing.

<For Optimum Use of this Watch>

In order to use this watch comfortably, try to store the watch in a bright location at all times.

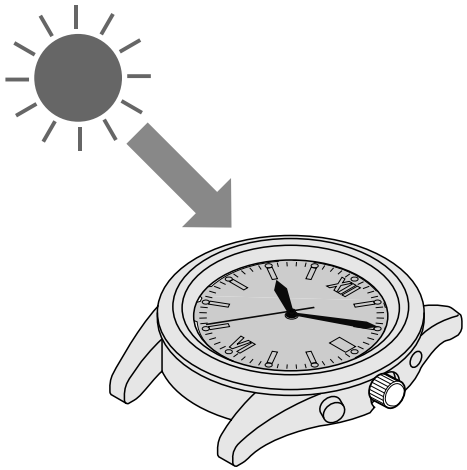
◆ Charge the way by exposing the dial (solar cell side) to direct sunlight or fluorescent light.





◆ When the watch is removed, try to place it in as bright a location as possible such as near a window so that sunlight shines onto the watch dial. This will keep the watch charged continuously and enable it to continue to run properly at all times.

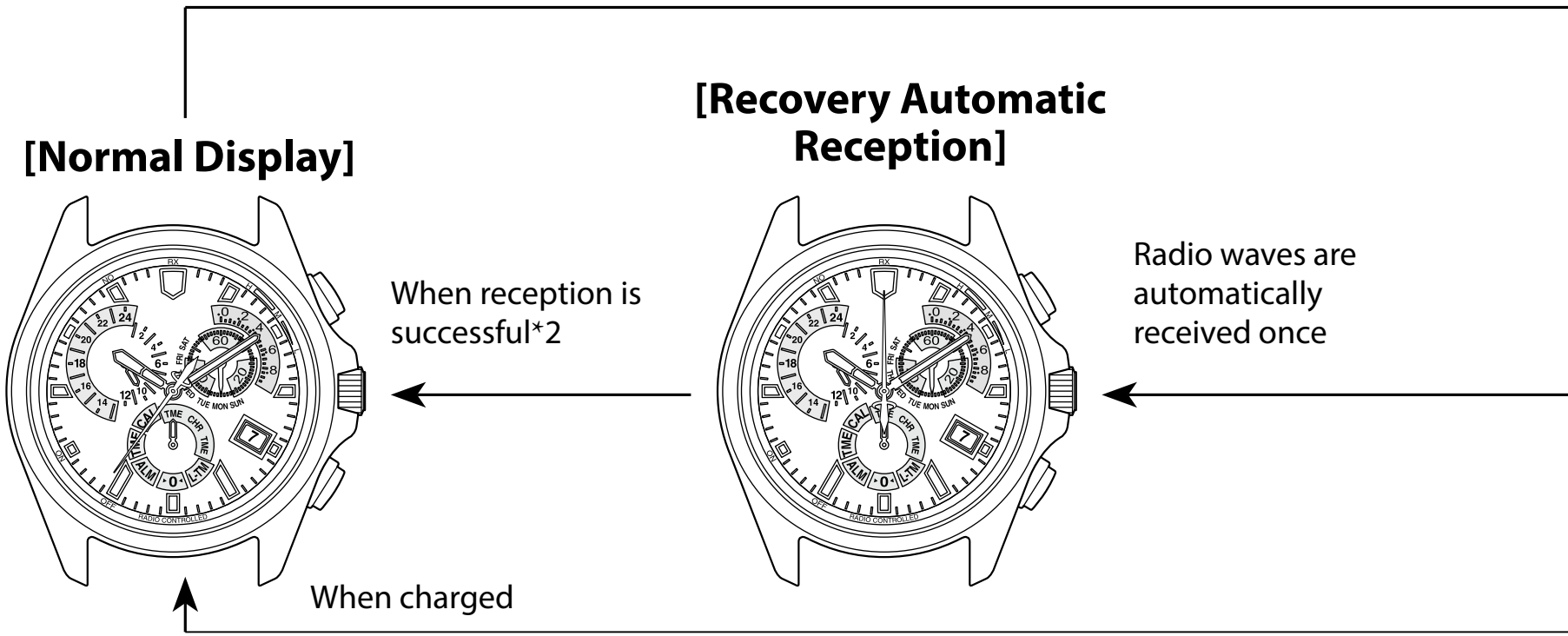
◆ If you frequently wear long sleeves, the fabric may cover the watch and prevent it from being exposed to light resulting in the watch becoming insufficiently charged. It is recommended to charge the watch once a month by exposing the dial to direct sunlight.



[Note] Avoid charging the watch at locations that reach a high temperature such as an automobile dashboard.

13. Unique Functions of Eco-Drive Watches

When the watch becomes insufficiently charged, the display changes as shown below.



*1: If the watch has stopped as a result of being insufficiently charged, a minimum of about 30 minutes are required until recovery automatic reception even if the watch is exposed to light.

*2: If recovery automatic reception has failed, the watch begins to run after returning to the time when the watch stopped as a result of being insufficiently charged. In this case, although the second hand moves at one second intervals, since the time is incorrect, first set the time and date manually or by on demand reception before using the watch.

Second hand begins two-second interval movement

When sufficiently charged by exposing the dial (solar cell) to light

[Insufficient Charge Warning Display]

When the watch becomes insufficiently charged due to not exposing the dial (solar cell) to light *1

If insufficient charge warning continues for 4 days or more

Watch stops due to being insufficiently charged

2-second interval movement

A. Power Save Function

<Power Save>

When the solar cell is continuously not exposed to light for 30 minutes or more, the second hand stops at the 12:00 position and the watch enters the Power Save mode (to reduce power consumption).

- Other hands continue to move normally.

<Canceling Power Save>

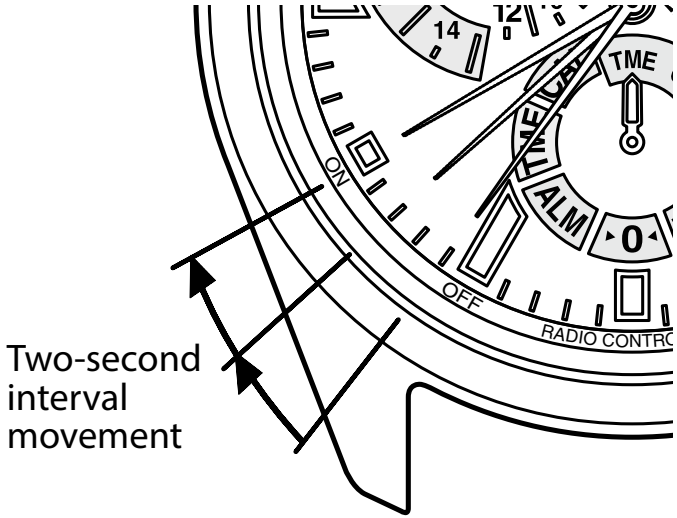
The power save function is canceled automatically when the solar cell is exposed to light.

- When the power save function is canceled, the second hand advances to return to the current time and begins one-second interval movement.
- Two-second interval movement begins if the watch is insufficiently charged. When this happens, sufficiently charge the watch so that it returns to one-second interval movement.

[Note] Although the watch will continue to be accurate to within the time accuracy range in the power save mode, when the power save function is canceled, be sure to perform on demand reception before using.

B. Insufficient Charge Warning Function

The second hand changes from one-second interval movement to two-second interval movement. After about 4 days have passed since the start of two-second interval movement, the watch stops as a result of being insufficiently charged.



Two-second interval movement

[Note] During two-second interval movement:
(1) Automatic reception and on demand reception are not available, and the time cannot be corrected manually.
(2) Only the time mode is displayed, and other modes cannot be used.

C. Overcharging Prevention Function

When the rechargeable cell becomes fully charged by exposing the solar cell to light, the overcharging prevention function is activated automatically to prevent the battery from being charged further. There is no effect on the rechargeable cell, timekeeping accuracy, watch functions or performance no matter how much the watch is charged.

14. General Reference for Charging Times of Eco-Drive Watches

* Below are the approximate times required for charging when exposing the watch dial to light continuously.
Please use this table as a reference only.

Environment	Illuminance (lx)	Charging Time (approximate)		
		To keep working normally for one day	To start working normally when the rechargeable cell is empty	To charge fully when the rechargeable cell is empty
Direct sunlight (Outdoors)	**100,000**	2 minutes	45 minutes	9 hours
Cloudy (Outdoors)	**10,000**	12 minutes	2.5 hours	45 hours
Less than 20 cm from 30 W fluorescent light	**3,000**	40 minutes	6.5 hours	150 hours
Indoor	**500**	4 hours	45 hours	——

Charging time for 1 day of operation: Time required for charging the watch to run normally for 1 day

[Note]

Once fully charged, the watch has a continuous operating time of about six months without further charging. When the Power Save function has been activated, the watch will continue to keep the correct time for about one year. However, if the watch stops running as a result of being insufficiently charged, a considerable amount of time is required to charge so that it starts running again as is indicated in the table. It is therefore recommended to charge the watch at least once a month by exposing to direct sunlight.

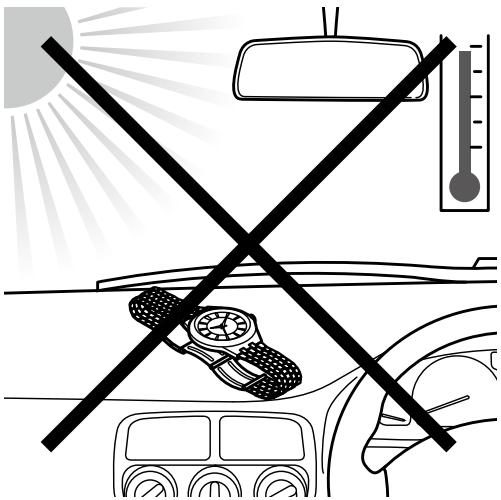
15. Eco-Drive Watch Handling Precautions

<Always make sure to recharge frequently>

- Please note that if you wear long sleeves, the watch may stop as a result of being covered by your sleeve and blocked from the light.
- When you take off the watch, try to place it in as bright a location as possible. This will ensure that it will continue to run properly.

⚠ CAUTION Recharging Precautions

- Do not charge the watch at a high temperature (about 60°C or higher) as doing so may cause the movement to malfunction.



Examples:

- Charging the watch too close to a light source which generates a large amount of heat such as an incandescent lamp or halogen lamp.
  * When charging under an incandescent lamp, be sure to leave 50cm or more between the lamp and the watch to avoid exposing the watch to excessive heat.
- Charging the watch in a location where the temperature may become extremely high such as on the dashboard of a vehicle.

<Replacement of Rechargeable Cell>

- Because the watch uses a rechargeable cell, you do not need periodical cell replacement. However, power consumption may increase after using for an extended period of time due to deterioration, and the power may run out earlier than expected. To avoid this, we recommend that you have your watch inspected (Charge basis) periodically.

⚠ WARNING Handling of Rechargeable Cell

- The rechargeable cell should never be removed from the watch.
  If for any reason it becomes necessary to remove the rechargeable cell from the watch, keep out of the reach of children to prevent accidental swallowing.
  If the rechargeable cell is accidentally swallowed, consult a doctor immediately.
- Do not dispose of the rechargeable cell with ordinary garbage. Please follow the instructions of your municipality regarding collection of batteries to prevent the risk of fire or environmental contamination.

⚠ WARNING Use Only the Specified Battery

- Never use a battery other than the rechargeable cell specified for use in this watch.
  Although the watch structure is designed so that it will not operate when another type of battery is installed, if a silver battery or other type of battery is installed in the watch and the watch is recharged, there is the risk of overcharging which may cause the battery to rupture. This can cause damage to the watch and injury to the wearer.
  When replacing the rechargeable cell, always make sure to use the designated rechargeable cell.

16. Troubleshooting

Radio Wave Reception Function: Try checking the following when you think a problem has occurred.

Problem	Check Items	Corrective Actions
Watch does not begin reception	• Is the mode at the time mode (TME) or local time mode (L-TM) ?	• Pull the crown out to Position 1 and turn to set the mode to the timer mode or local time mode.
	• Does the second hand move to "RX: Reception in progress" ?	• Continuously depress button (A) and release when the second hand points to the RX position.

Problem	Check Items	Corrective Actions
Unable to receive radio waves (even within a receivable area)	• Are there objects that block radio waves or generate noise nearby ? • Are radio waves attempted to be received away from a window ?	• Try receiving radio waves while facing the 6:00 position of the watch towards a window while avoiding objects that block radio waves or generate noise. • Try changing the direction, location and angle of the watch several times so that the second hand points to a reception level to find the location at which radio waves are received easily. (Refer to the sections entitled, “For Good Reception” and “Locations where Reception may be Difficult” of this manual.
Unable to receive radio waves even though second hand points to RX	• Is the second hand indicating a reception level of H, M or L even during reception ?	• Wait until reception is completed (until the second returns to one-second interval movement)
Time does not match telephone time service even though radio wave can be received	• Has the reference position been set correctly ?	• Check the reference position. If the reference position is not correct, refer to the section entitled, “Correcting the Reference Position” of this manual and reset the reference position.

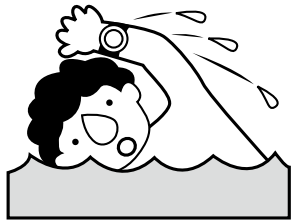
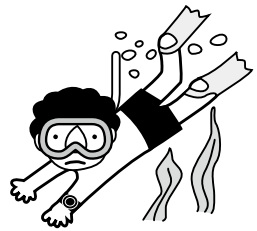
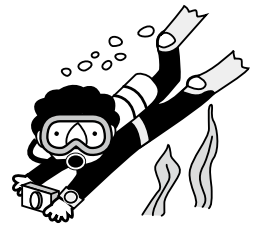
17. Precautionary Items and Usage Limitation

⚠ WARNING Water Resistance

- Non-water resistant watches cannot be used underwater or in environments in contact with water.
- Water-resistance for daily use (to 3 atmospheres) means that the watch may be worn while washing your face or in the rain, but is not to be immersed in water.
- Upgraded water-resistance for daily use (to 5 atmospheres) means that the watch may be worn while swimming, but is not to worn while skin diving.
- Upgraded water-resistance for daily use (to 10/20 atmospheres) means that the watch may be worn while skin diving, but not while scuba or saturated diving using helium gas.

Name	Indication	Specification
	Watch dial and Case back	
Non-water-resistant watch	————————	Non-water-resistant
Everyday-use water-resistant watch	WATER RESIST (ANT)	Water-resistant to 3 atmospheres
Upgraded everyday-use water-resistant watch	WATER RESIST (ANT) 5 bar	Water-resistant to 5 atmospheres
	WATER RESIST (ANT) 10/20 bar	Water-resistant to 10 or 20 atmospheres

- Refer to the watch dial and the case back for the indication of the water resistance of your watch. The following chart provides examples of use for reference to ensure that your watch is used properly. (The unit “1bar” is roughly equal to 1 atmosphere.)
- WATER RESIST (ANT) xx bar may also be indicated as W.R. xx bar.

	Water-related use				
	 Minor exposure to water(washing face, rain, etc.)	 Swimming and general washing work	 Skin diving, marine sports	 Scuba diving using an air tank	 Operate the crown or button when the watch is wet
	NO	**NO**	**NO**	**NO**	**NO**
	OK	**NO**	**NO**	**NO**	**NO**
	OK	**OK**	**NO**	**NO**	**NO**
	OK	**OK**	**OK**	**NO**	**NO**

⚠ CAUTION To avoid injury

- Be particularly careful when wearing your watch while holding a small child, to avoid injury.
- Be particularly careful when engaged in strenuous exercise or work, to avoid injury to yourself and others.
- Do NOT wear your watch while in a sauna or other location where your watch may become excessively hot, since there is the risk of burns.
- Be careful when putting on and taking off your watch, since there is a risk of damaging your fingernails, depending on the manner in which the band is fastened.
- Take off your watch before going to bed.

⚠ CAUTION Precautions

- Always use the watch with the crown pushed in (normal position). If the crown is of the screw lock-type, make sure it is securely locked.
- Do NOT operate the crown or any push buttons when the watch is wet. Water may enter the watch causing damage to vital components.
- If water enters the watch or the watch fogs up and does not clear up even after a long time, consult your dealer or an authorized service center for inspection and/or repair.
- Even if your watch has a high level of water resistance, please be careful of the following.
  - If your watch is immersed in sea water, rinse thoroughly with fresh water and wipe with a dry cloth.

- Do not pour water from a tap directly onto your watch.
- Take off your watch before taking a bath.

• If seawater enters the watch, place the watch in a box or plastic bag and immediately take it in for repair. Otherwise, pressure inside the watch will increase, and parts (crystal, crown, push button, etc.) may come off.

⚠ CAUTION When Wearing your Watch

<Band>

• Leather, genuine skin and rubber (urethane) bands will deteriorate over time due to perspiration, body oils and dirt. Be sure to replace the band periodically.
• The durability of a leather band may be affected when wet (fading, peeling of adhesive), owing to the properties of the material. Moreover, wet leather may cause a rash.
• It is recommended to take off the watch if it gets wet, even if the watch itself is water resistant.
• Do not wear the band too tightly. Try to leave enough space between the band and your skin to allow adequate ventilation.
• The rubber (urethane) band may be stained by dyes or soil present in or on clothing or other accessories. Since these stains may not be removable, caution is required when wearing your watch with items that tend to easily transfer color (articles of clothing, purses, etc.). In addition, the band may be deteriorated by solvents or moisture in the air. Replace with a new one when it has lost elasticity or become cracked.

- Please request adjustment or repair of the band in the following cases:
  - You notice an abnormality with the band due to corrosion.
  - The pin of the band is protruding.
- We recommend seeking the assistance of an experienced watch technician for sizing of your watch. If adjustment is not done correctly, the bracelet may unexpectedly become detached leading to loss of your watch or injury.
  Consult an authorized service center.

<Temperature>

- The watch may stop or the function of the watch may be impaired in extremely high or low temperature. Do not use the watch in places where the temperature is outside the operating temperature range as stated in the specifications.

<Magnetism>

- Analog quartz watches are powered by a step motor that uses a magnet. Subjecting the watch to strong magnetism from the outside can cause the motor to operate improperly and prevent the watch from keeping time accurately.
  Do not allow the watch to come into close proximity to magnetic health devices (magnetic necklaces, magnetic elastic bands, etc.) or the magnets used in the latches of refrigerator doors, clasps used in handbags, the speaker of a cell phone, electromagnetic cooking devices and so on.

<Strong Shock>

- Avoid dropping the watch or subjecting it to other strong impact. It may cause malfunctions and/or performance deterioration as well as damage to the case and bracelet.

<Static Electricity>

- The integrated circuits (IC) used in quartz watches are sensitive to static electricity. Please note that the watch may operate erratically or not at all if exposed to intense static electricity.

<Chemicals, Corrosive Gasses and Mercury>

- If paint thinner, benzene or other solvents or products containing these solvents (including gasoline, nail-polish remover, cresol, bathroom cleaners and adhesives, water repellent, etc.) are allowed to come into contact with the watch, they may discolor, dissolve or crack the materials. Be careful when handling these chemicals. Contact with mercury such as that used in thermometers may also cause discoloration of the band and case.

<Protective Stickers>

- Be sure to remove any protective stickers that may be on your watch (case back, band, clasp, etc.). Otherwise, perspiration or moisture may enter the gaps between the protective stickers and the parts, which may result in a skin rash and/or corrosion of the metal parts.

⚠ CAUTION Always Keep Your Watch Clean

- Rotate the crown while it is pressed in fully and press the buttons periodically so they do not become stuck due to accumulations of foreign matter.
- The case and band of the watch come into direct contact with the skin in the same manner as undergarments. Corrosion of the metal or unnoticed soiling such as that caused by perspiration and dirt can soil sleeves and other portions of clothing. Keep your watch clean at all times.
- The case and band of the watch come into direct contact with the skin. If you think there is something wrong, discontinue wearing the watch immediately and consult your physician. In the case of accumulation of sweat or dirt on a metal band or case, clean thoroughly using a brush and neutral detergent. In the case of a leather band, wipe clean using a dry cloth.
- Leather bands may become discolored by perspiration or dirt. Always keep your leather band clean by wiping with a dry cloth.

Caring for your Watch

- Wipe any dirt or moisture such as perspiration from the case and crystal with a soft cloth.
- For a metallic, plastic or rubber (urethane) watchband, wash any dirt off with water. Remove the small amounts of dirt trapped between the crevices of the metallic band with a soft brush.
- For a leather band, wipe off dirt using a dry cloth.
- If you will not be using your watch for an extended period of time, carefully wipe off any perspiration, dirt or moisture and store in a proper location, avoiding locations subject to excessively high or low temperatures and high humidity.

<When Luminous Paint is used for your watch>

The paint on the dial and hands helps you with reading the time in a dark place. The luminous paint stores light (daylight or artificial light) and glows in a dark place. It is free from any radioactive substance or any other material harmful to a human body or environment.

- The light emission gradually becomes weaker as time passes.
- The duration of the light ("glow") will vary depending on the brightness, types of and distance from a light source, exposure time, and the amount of the paint.
- The paint may not glow and/or may dissipate quickly if exposure to light was not sufficient.

18. Warranty and service

<Free Guarantee>

In the case a malfunction has occurred during the course of normal use while the watch is still under warranty, the watch will be repaired free of charge in accordance with the conditions of the warranty included with this manual.

<Stock Period of Repair Parts>

Our standard period for stocking repair parts for each model is generally seven years. When an exterior part such as the watch case, glass, dial, hand, crown or band is damaged, a spare part with different appearance may sometimes be used.

<Repair Period>

Repairs can be performed on your watch within the repair parts stock period even after the free guarantee has expired. However, you will be charged for these repairs. Please take the watch to the shop where you purchased it and ask whether it can be repaired because the repair period varies according to the conditions of use, environment and so forth. Moreover, there are cases in which it is difficult to restore the watch to its original accuracy when decreased accuracy has resulted from long-term use.

<Change of Address or Receiving as a Gift>

In the event that you have moved or have received your watch as a gift, and are not able to bring your watch to the shop where it was purchased for servicing, please consult an authorized service center.

<Periodic Inspection (Charge Basis)>

- **Water resistance**
  As the water resistance will be reduced over time, you should have your watch inspected and its water resistance verified every 2-3 years (charge basis) to extend its life and ensure safety. To maintain its water resistance, it is recommended to request us to replace the packings and other parts of your watch.
- **Disassembling for internal cleaning (repair)**
  You should have your watch disassembled and its internal components cleaned periodically to extend its life. Lubrication oils are used to reduce wearing of moving parts such as gears. However, over time the lubrication oils will degrade and wear will increase, eventually resulting in malfunction. Please have your watch undergo internal cleaning once every 5 years as a guide.

<Request to Customers>

All parts of this watch, except for the band, are to be repaired only at CITIZEN.
This is because special technologies and equipment are required to perform repairs, inspections and adjustments. Please make requests for repairs to an authorized service center when having your watch repaired.

<Other Inquiries>

If you have any questions regarding the way warranty, repairs or other matters, please inquire at the shop where you purchased your watch or an authorized service center.

19. Specifications

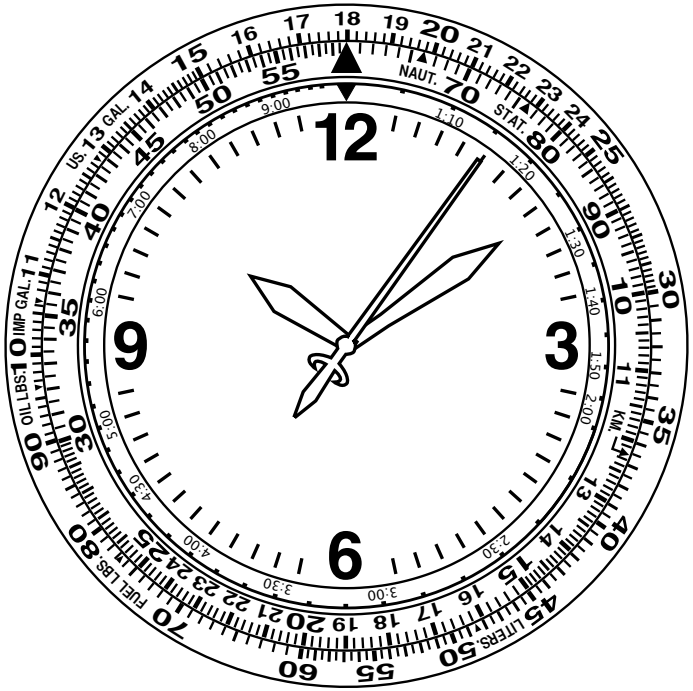
1. Model : E610
2. Type: Analog solar-powered watch
3. Timekeeping accuracy: Within ±15 seconds per month on average (when worn at normal temperatures of +5°C to +35°C and when not receiving radio waves)
4. Operating temperature range: -10°C to +60°C
5. Display functions:
    - Time: Hours, minutes, seconds
    - Calendar: Date, day
6. Additional functions:
    - Radio wave receiving function (automatic reception, on demand reception, recovery automatic reception)
    - Automatic transmitter station selection function (for use exclusively with Japan standard time radio waves)
    - Reception in progress display function (RX)
    - Reception level display function (H,M,L)

- Reception result confirmation function (H,M,L,NO)
- Chronograph function (60 minute timing, 1/20 second units)
- Local time function (time difference correction: 1 hour units)
- Reference position confirmation and correction function
- Alarm function (24 hour clock alarm)
- Solar power function
- Power save function
- Insufficient charge warning function
- Overcharging prevention function

7. Continuous operation times:
   - Time until watch stops without charging after being fully charged
     : Approx. 1 year (when power save function is operating)
     : Approx. 6 months (when power save function is not operating)
   - Insufficient charge warning display to stopped: Approx. 4 days
     (Continuous operation times vary depending on the conditions of use.)
8. Battery: Rechargeable cell (lithium button cell), 1pc

* Specifications are subject to change without notice.

21.How to use the calculator function



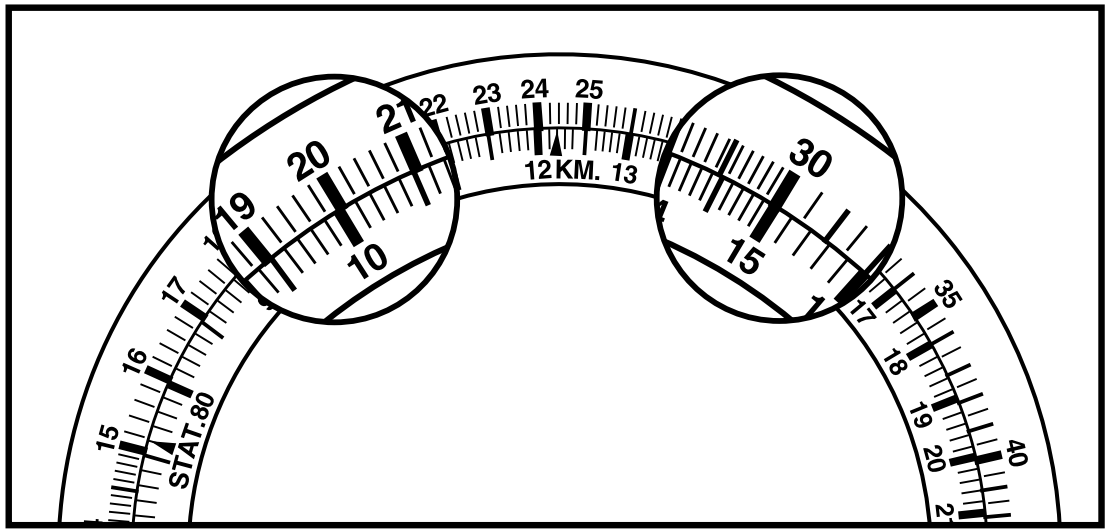
Note: In some models, the inner and outer scales are opposite. Be sure to make the appropriate substitutions to the following instructions.

Simple Calculations

[How to do multiplication]

Q : 20 × 15

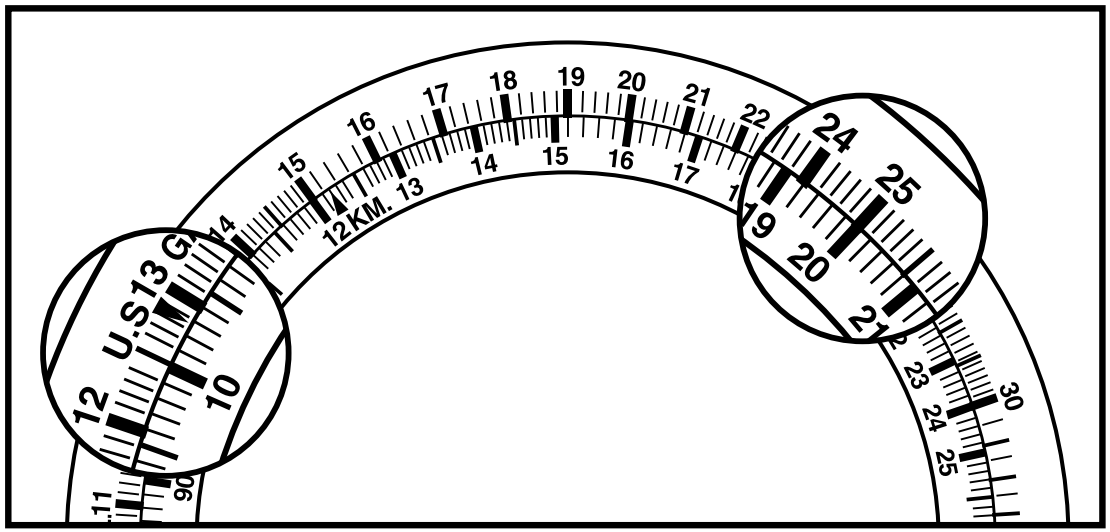
A : Adjust 20 of the outer scale until it points to 10 of the inner scale.
You can read the digit 30 from of the scale of the outer scale corresponding to 15 of the inner scale and adding a unit, you can get the answer 300.



[How to do division]

Q : 250 ÷ 20

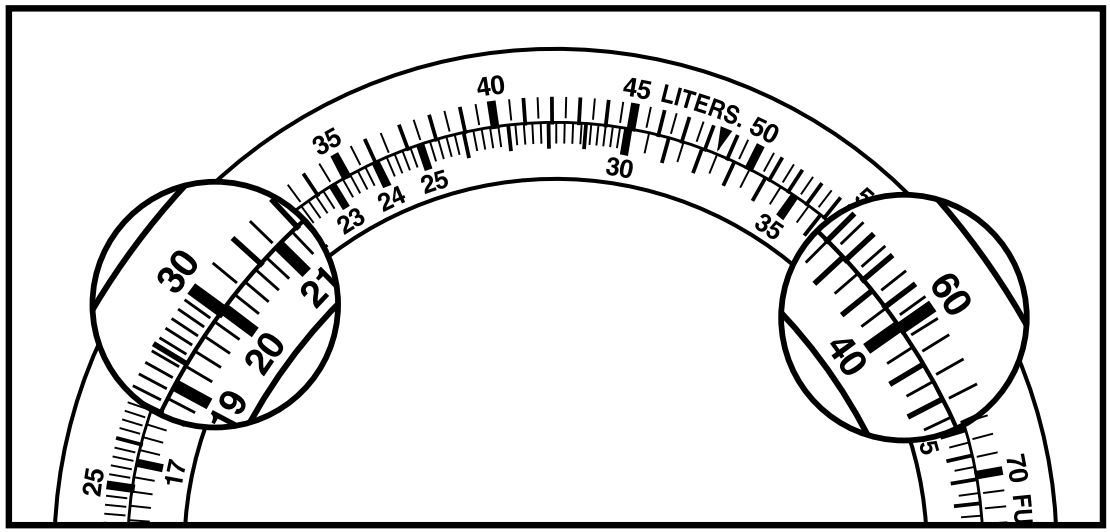
A : Adjust 25 of the outer scale until it points to 20 of the inner scale.
You can read the digit 12.5 from of the scale of the outer scale corresponding to 10 of the inner scale and get the answer 12.5.



[How to calculate ratios]

Q : 30/20 = 60/A

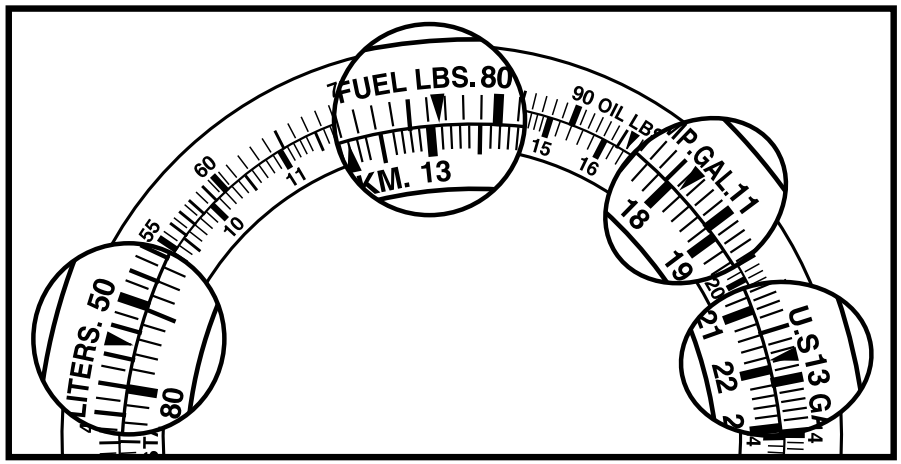
A : Adjust 30 of the outer scale until it points to 20 of the inner scale.
You can read the digit 40 from of the scale of the inner scale corresponding to 60 of the outer scale and on all the positions above the scale, the ratio between "inner and outer" is the ratio between "30 and 20". Therefore, you can determine the answers of other ratios.



[How to convert volume between different units of measurement]

You can convert fuel between Pounds (lbs), U.S Gallons, Imperial Gallons or Liters.

Q : How much is 13.1 lbs of fuel if it is converted into U.S.Gallons, Imperial Gallons and Litres respectively ?
(1 FUEL.LBS is 0.167 U.S.GAL / 0.139 IMP.GAL / 0.632 Liters)

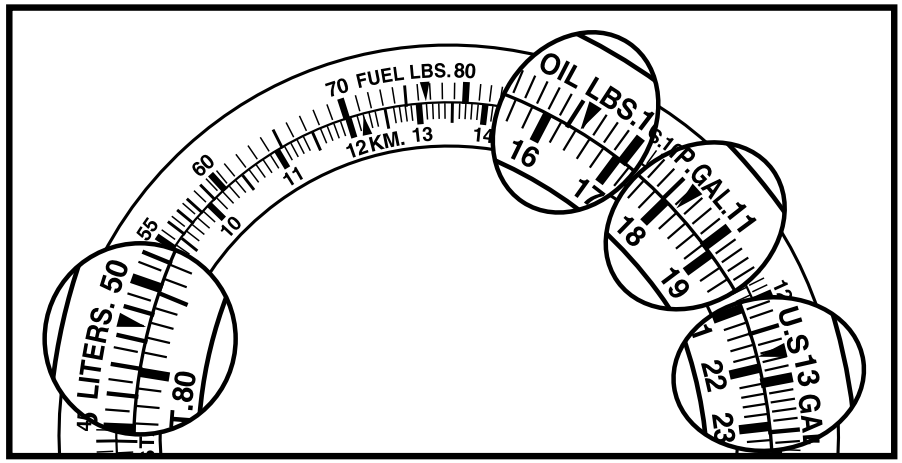


A : Adjust the "▼" of FUEL.LBS. of the outer scale until it points to the digit 13.1, which you want to convert, of the inner scale.
Read the digit corresponding to the "▼" of U.S.GAL of the outer scale.
Adding a unit and you will get the answer which is 2.18 U.S.GAL.
Similarly, read the digit corresponding to the "▼" of IMP.GAL., LITERS., you can get the answers, which are 1.82 IMP.GAL and 8.28 Liters.

[How to convert weight between the different units of measurement]

You can convert between Oil in Pounds to U.S. Gallons, Imperial Gallons or Liters.

Q : How much is 16.4 lbs of oil converted into U.S. Gallons, Imperial Gallons and Liters respectively ?
(1 OIL.LBS. is 0.133 U.S.GAL, 0.111 IMP.GAL and 0.503 Liters)



A : Adjust the "▼" of OIL.LBS. of the outer scale until it points to the digit 16.4, which you want to convert, of the inner scale.
Read the digit corresponding to the "▼" of U.S.GAL of the outer scale. Adding a unit and you will get the answer which is 2.18 U.S.GAL.
Similarly, read the digit corresponding to the "▼" of IMP. GAL., LITERS., you can get the answers, which are 1.82 IMP. GAL and 8.25 Liters.

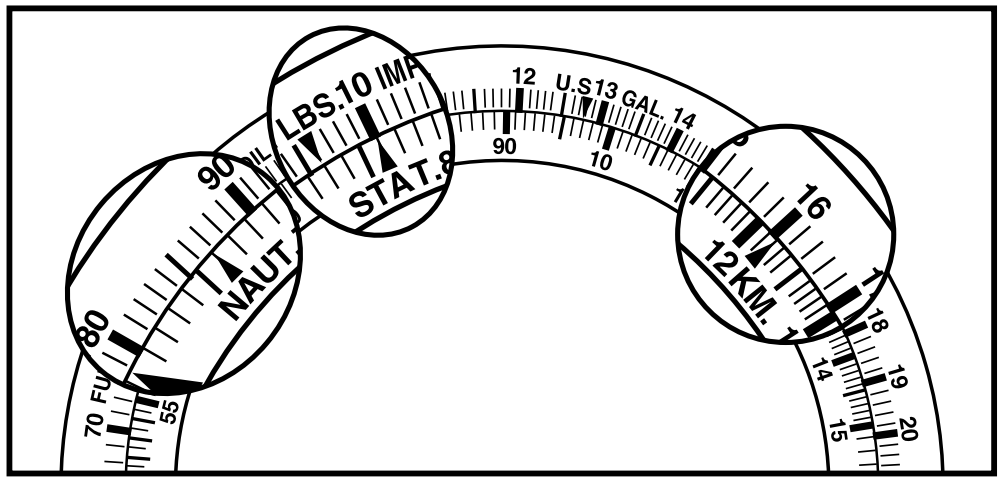
[How to convert distance between the different units of measurement]

You can convert between Kilometers, Nautical Miles and Statute miles.

Q : How many Kilometers and Nautical Miles are equivalent to 1 Statute Mile ?

A : Adjust the "▼" of 10 of the outer scale until it points to the "▲" of STAT of the inner scale.

Result: Read 16 of the scale corresponding to the "▲" of KM of the inner scale.
Move the decimal point once, and you will get the answer which is 1.6km.
Similarly, you can get the answer 86.6 NAUT corresponding to the "▲" of NAUT.



[How to convert fuel between different units of measurement]

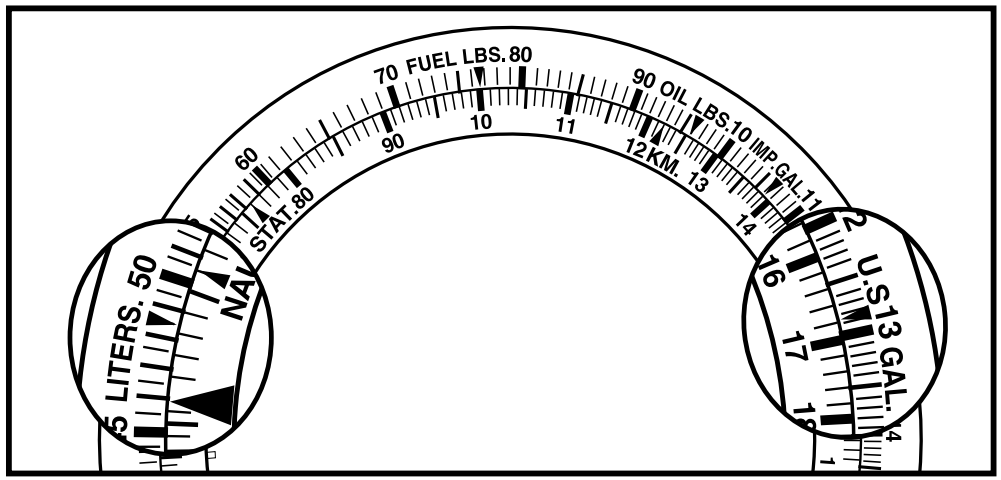
You can convert between Liters, US Gallons or Imperial Gallons.

Q : How many Liters are equivalent to 16.8 U.S Gallons ?

A : Align the "▼" of U.S. GAL of the outer scale with the digit 16.8, which you want to convert, of the inner scale.

Result: The converted value (about 63.5) corresponding to the "▼" of liter of the outer scale can be determined.

(1 U.S. GAL = 3.78541 Liters)

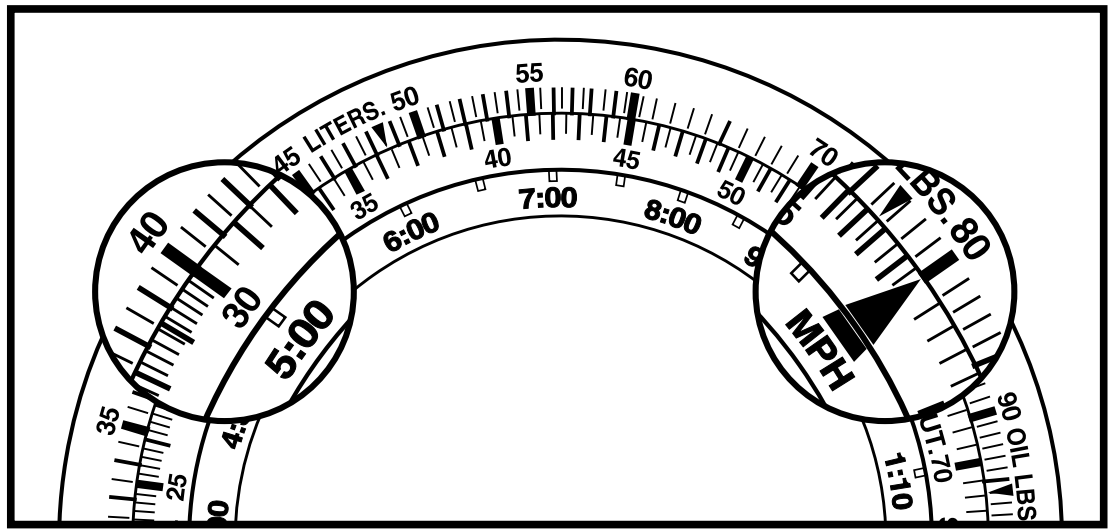


How to use the motor sports function

[Calculation of time needed to reach a set distance]

Q : How long does it take for a vehicle travelling at a speed of 80km to travel 400km ?

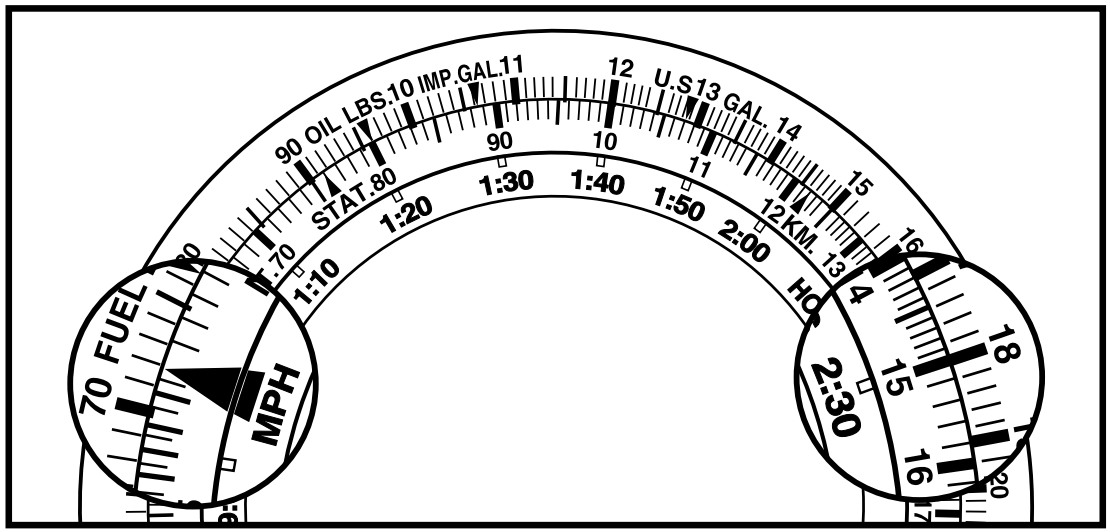
A : Align 80 of the outer scale with the SPEED INDEX "▲" of the inner scale.
Result: 5 Hours (5.00) of the inner scale correspondes to 40 of the outer scale.



[Calculation of speed]

Q : What is the speed of a vehicle travelling a distance of 180km for period 2 hours and 30 minutes ?

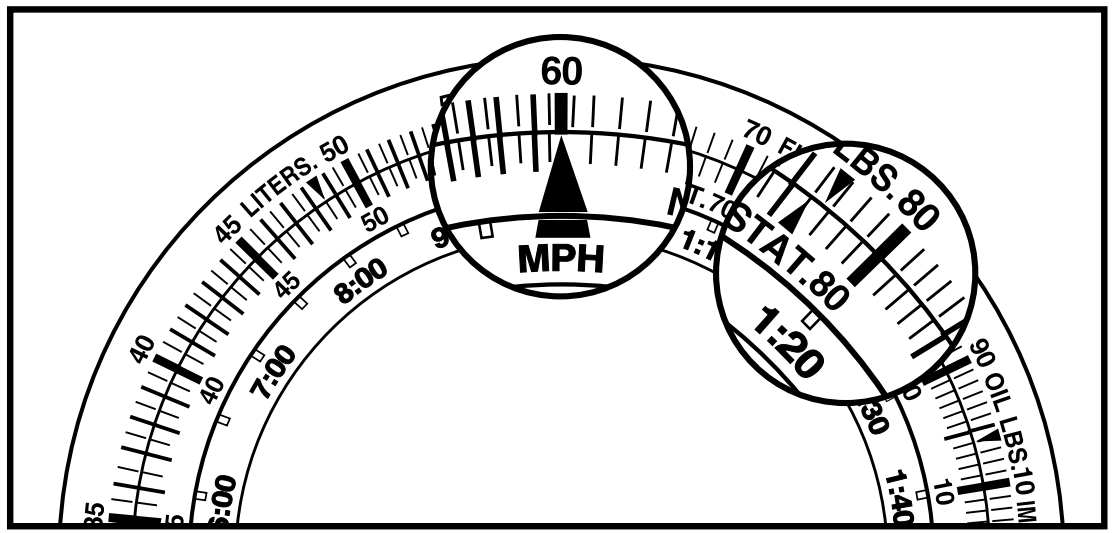
A : Align 18 of the outer scale with 2:30 of the inner scale.
Result: 72km can be determined by comparing the SPEED INDEX "▲" of the inner scale and corresponding outer scale indications.



[Calculation of driving distance]

Q : Supposing that the speed is 60km/hour, what distance will a vehicle travel in 1 hour and 20 minutes ?

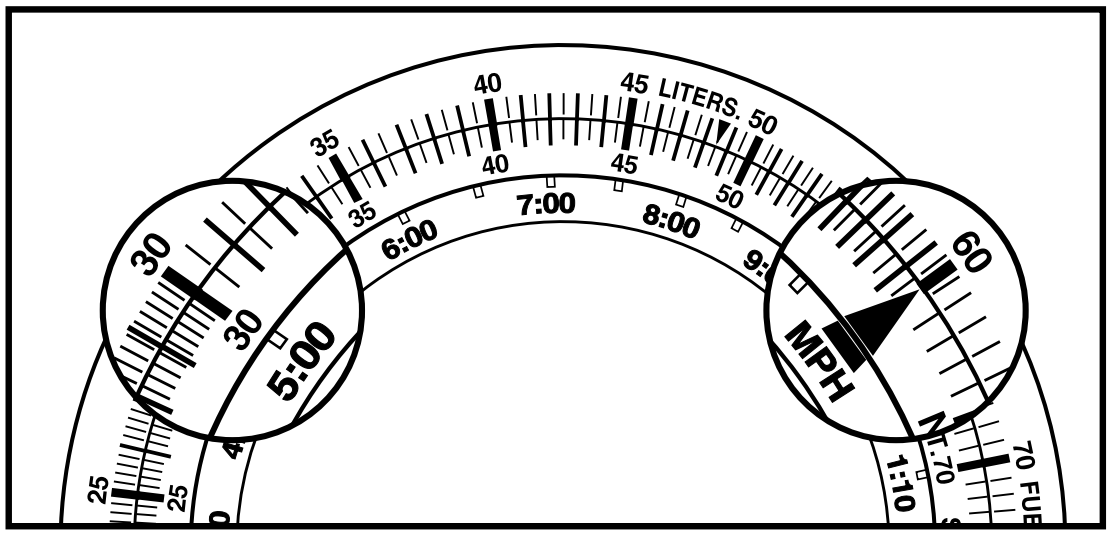
A : Align 60 of the outer scale with the SPEED INDEX "▲" of the inner scale. Result: 80km corresponding to 1:20 of the inner scale can be figured out.



[Calculation of fuel consumption rate (consumed per hour)]

Q : If the drive time is 5 hours and 30 liters fuel are consumed, what is the fuel consumption rate (liters/hour) ?

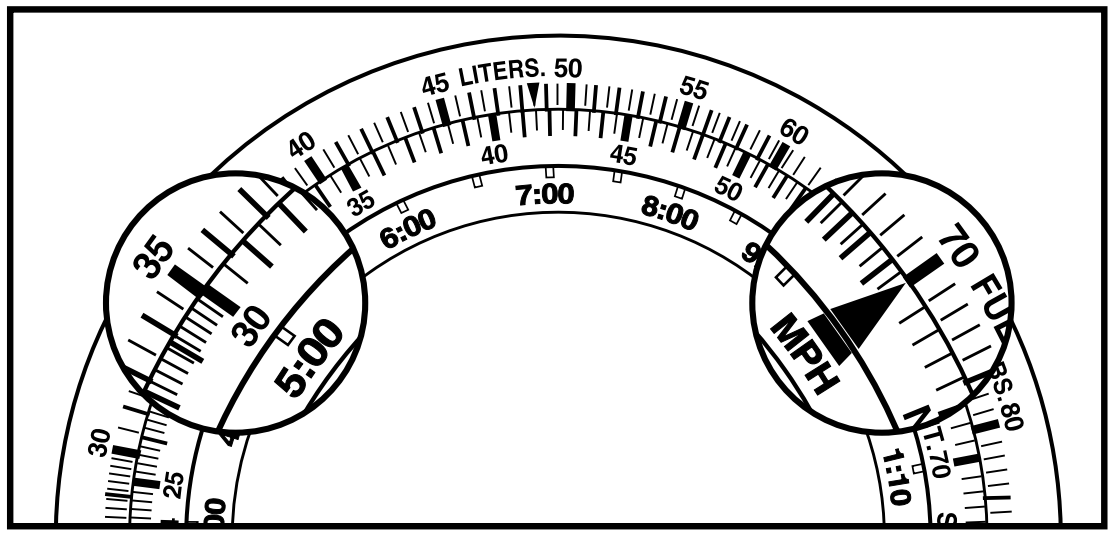
A : Align 30 of the outer scale with 5:00 of the inner scale.
Result: 6 Liters per hour - 60 is indicated on the SPEED INDEX "▲" corresponding to the outer scale.



[Calculation of fuel consumption]

Q : How much fuel is needed for a vehicle to run 5 hours if the fuel consumption rate of that vehicle is 7 liters per hour?

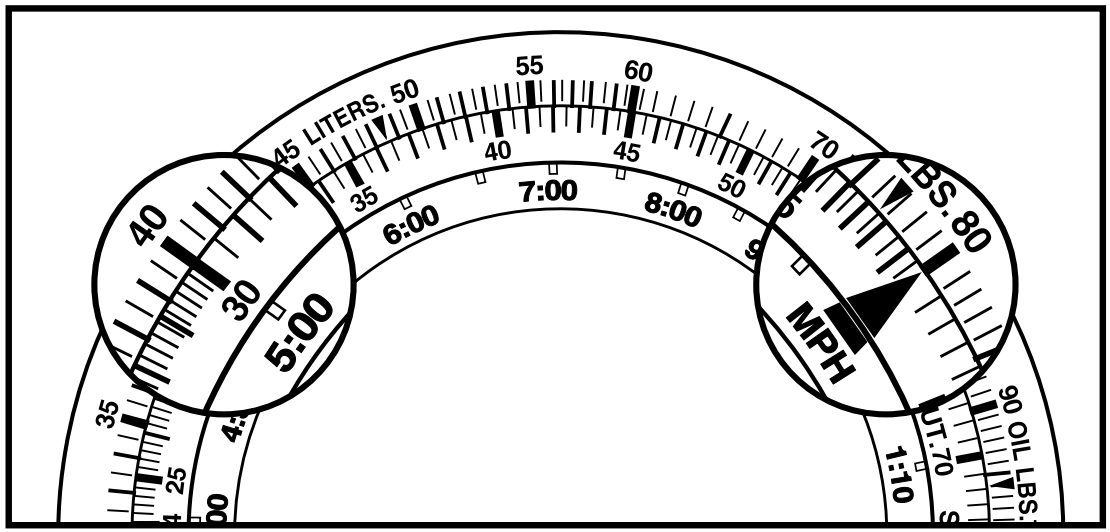
A : Align 70 of the outer scale with the "▲" of SPEED INDEX of the inner scale. Result: 35 liters - 35 corresponds to 5.



[Calculation of drive time]

Q : How many hours can a vehicle whose fuel consumption rate is 8 liters/hour run using 40 liters of fuel ?

A : Align 80 of the outer scale with the SPEED INDEX "▲" of the inner scale.
Result: 5 Hours - 5:00 on the outer scale corresponds to 40 of the inner scale.

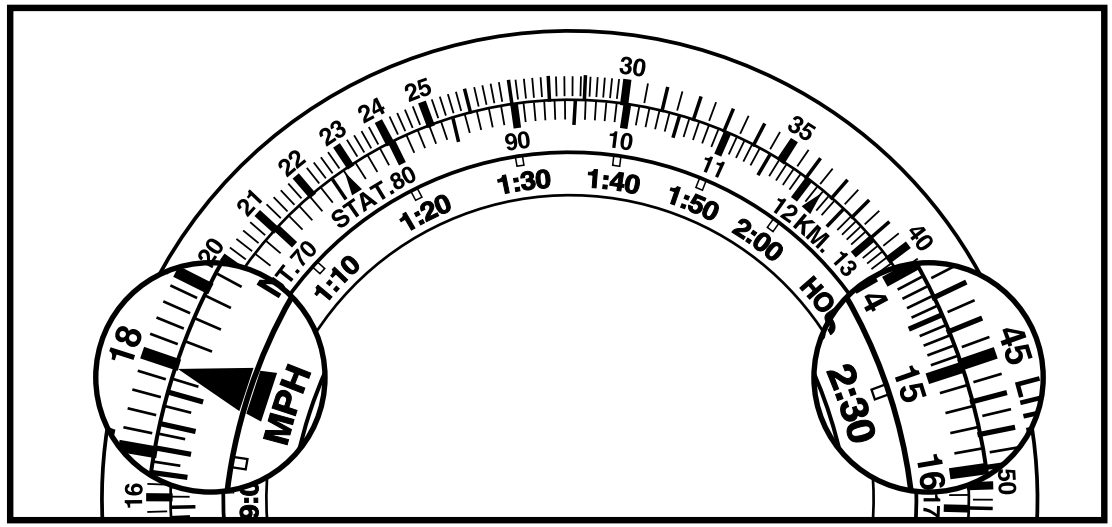


How to use the aviation function

[Calculation of time needed to travel a set distance]

Q : If the speed of an aircraft is 180 knots, how much time does it take the aircraft to fly 450 nautical miles ?

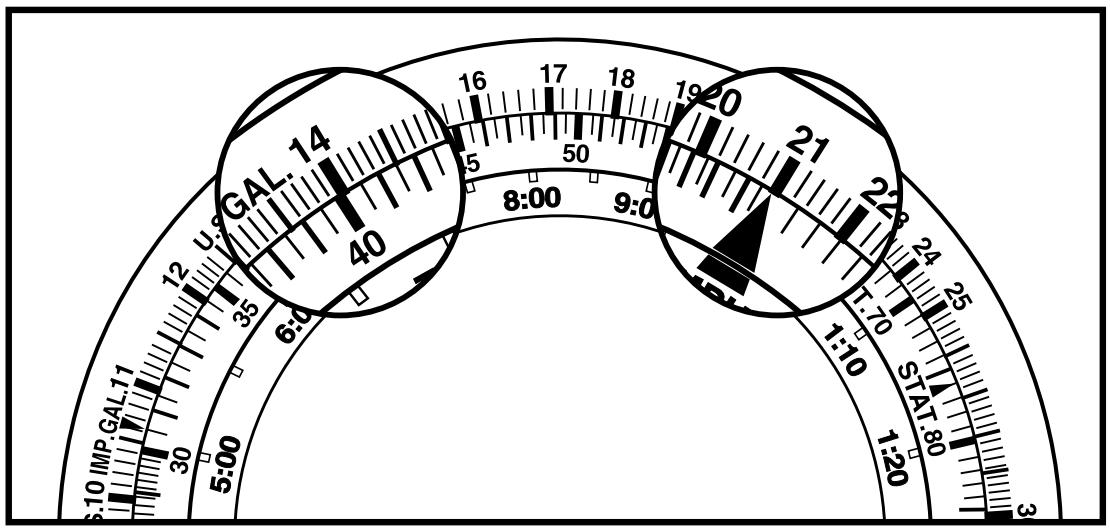
A : Align 18 of the outer scale with the SPEED INDEX "▲" of the inner scale. Result: 2 hours and 30 minutes - 2:30 of the inner scale corresponds to 45 of the outer scale.



[Calculation of flight distance]

Q : If the speed is 210 knots and the flight time is 40 minutes, how many nautical miles will an aircraft travel ?

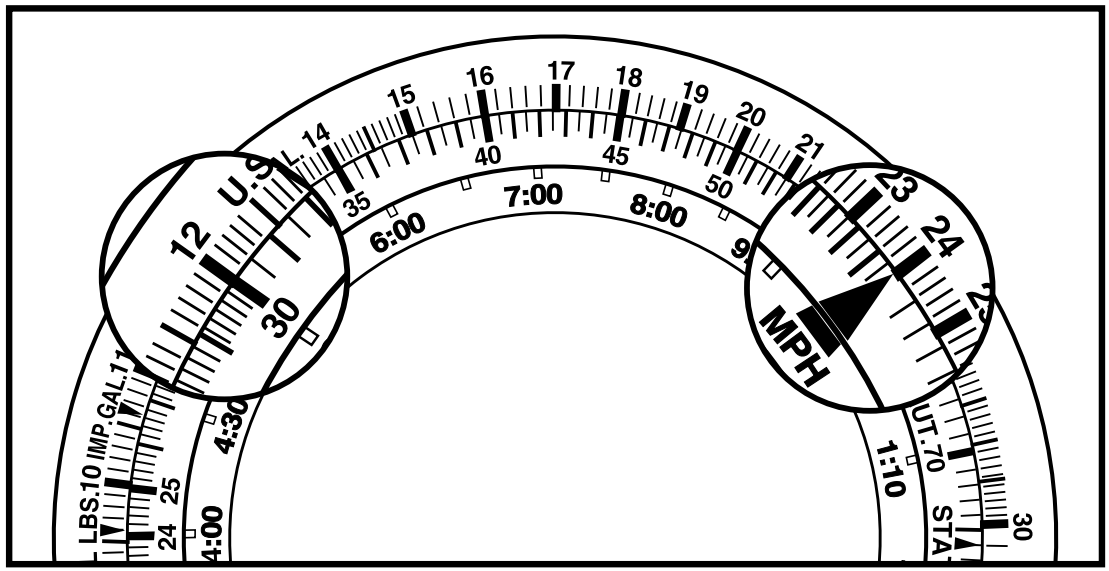
A : Align 21 of the outer scale with the SPEED INDEX "▲" of the inner scale.
Result: 140 Nautical Miles – 14 on the outer scale corresponds to 40 of the inner scale.



[Calculation of fuel consumption rate (consumption per hour)]

Q : If the flight time is 30 minutes and 120 gallons fuel is consumed, what is the fuel consumption rate ?

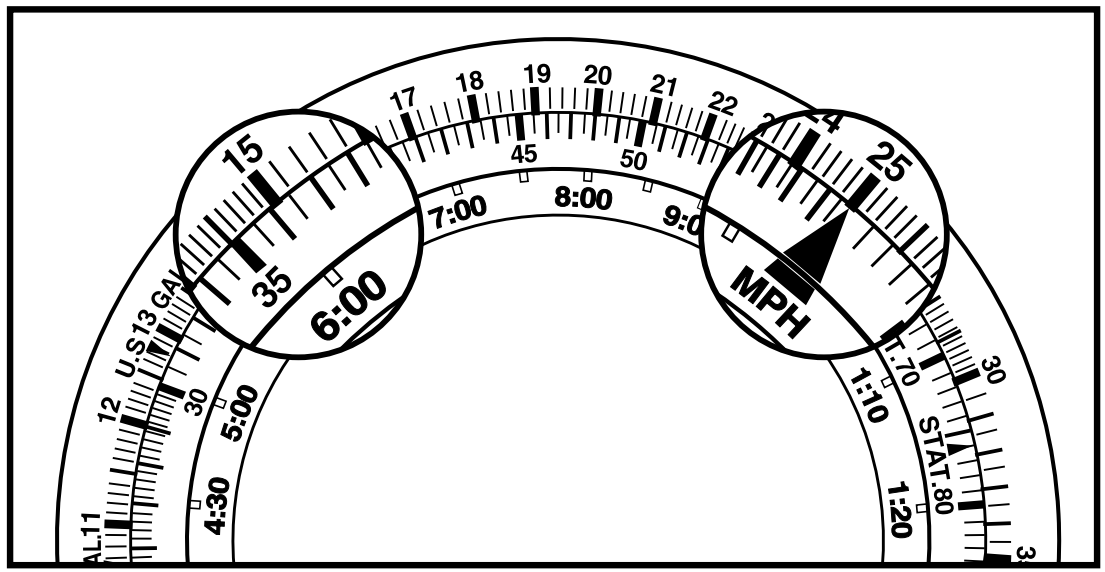
A : Align 12 of the outer scale with 30 of the inner scale.
Result: 240 gallons per hour - 24 corresponding to the SPEED INDEX "▲".



[Calculation of fuel consumption]

Q : If the fuel consumption rate of an aircraft is 250 gallons/hour, how many gallons of fuel are needed to fly 6 hours ?

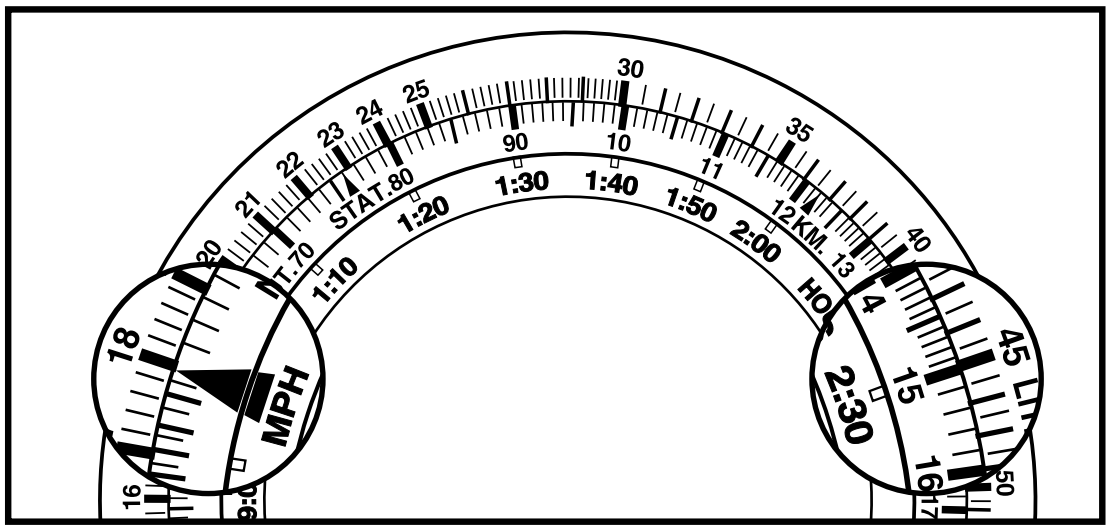
A : Align 25 of the outer scale with the "▲" of SPEED INDEX of the inner scale. Result: 1,500 gallons - 15 corresponds to 6:00.



[Calculation of the flight time]

Q : If an aircraft consumes 220 gallons per hour, how many hours can it fly when consuming 550 gallons fuel ?

A : Align 22 of the outer scale with the "▲" of SPEED INDEX of the inner scale.
Result: Two hours and thirty minutes - 2:30 corresponds to 55 of the outer scale.



Terms for units indicated on slide rules and their explanations

Category	Unit indicated on slide rule	Description
Distance units	NAUT.	Short for "nautical mile" *1
		1NAUT. = 1.852km (approx. 6,076 feet)
	STAT.	Short for "statute mile"
		1STAT. = 1.609km (5,280 feet)
	KM.	Short for "kilometer"
		1km = 3,280 feet
	FT.	Short for "feet" *2
Fuel units	LITERS.	1liter = 0.264 U.S. gallon
		= 0.22 IMP. gallon
	U.S.GAL	Short for "U.S. gallon"
		1U.S. gallon = 0.883 IMP. gallon *3
	IMP.GAL	Short for "imperial gallon" *4
		1IMP. gallon = 1.2 U.S. gallon

Category	Unit indicated on slide rule	Description
Weight units	KG.	Short for "kilogram." 1 kg = 2.22 pound
	LBS.	Short for "pound." 1 pound = 0.45 kg
	FUEL LBS.	Short for "fuel pound"
		1 FUEL pound = 0.167 U.S. gallon
		= 0.139 IMP. gallon
	OIL LBS.	Short for "oil pound"
		1 OIL pound = 0.133 U.S. gallon
		= 0.139 IMP. gallon

*1 : Nautical miles = Maritime distances, seaborne distances
This is the unit normally used by ships and aircraft.
*2 : 1 foot = one-third of a yard, 12 inches or approximately 30.48 cm
*3 : 1 U.S. gallon = 3.785 liters
*4 : 1 imperial gallon = 4.546 liter

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