



ANALOGUE QUARTZ  
Cal. 6M13  
PERPETUAL CALENDAR

# SEIKO QUARTZ

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### PERPETUAL CALENDAR

#### Cal. 6M13

#### FEATURES

The SEIKO Quartz Watch Cal. 6M13 is an analogue watch with three hands featuring alarm, calendar and calendar search functions.

##### ■ TIME

Indicated by three hands.

##### ■ CALENDAR

Date is displayed in numerals, and day of the week, month and year are indicated by the hands. The calendar automatically adjusts for odd and even months including February of leap years from 1400 to 2499.

##### ■ ONE-DAY ALARM

Can be set to ring once at a designated time and date within a month.

##### ■ DAILY ALARM

Can be set to ring regularly once a day.

#### ■ CALENDAR SEARCH FUNCTION

The day of the week for any desired date, month and year from 1400 to 2499 can easily be determined and displayed by one of the hands.

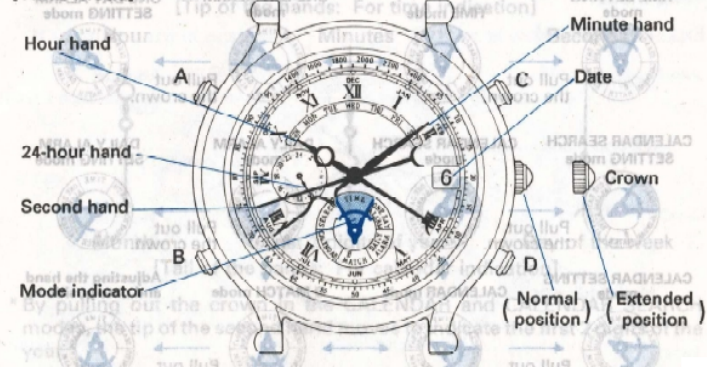
#### ■ BATTERY LIFE INDICATOR

The second hand moves at two-second intervals when the battery needs to be replaced.

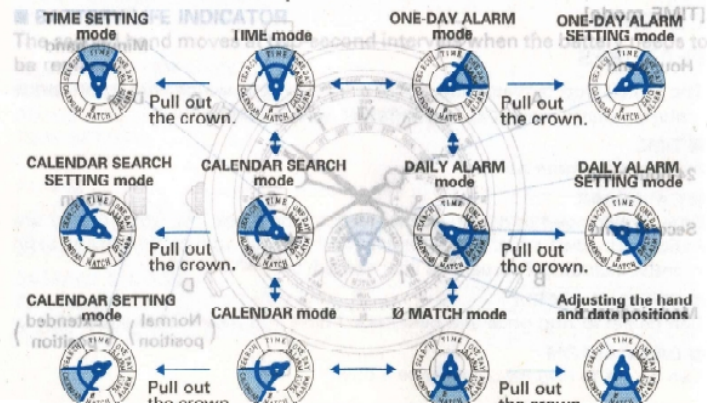
### MODES AND DISPLAYS

There are four buttons and a crown as indicated in the illustration below:

(TIME mode)

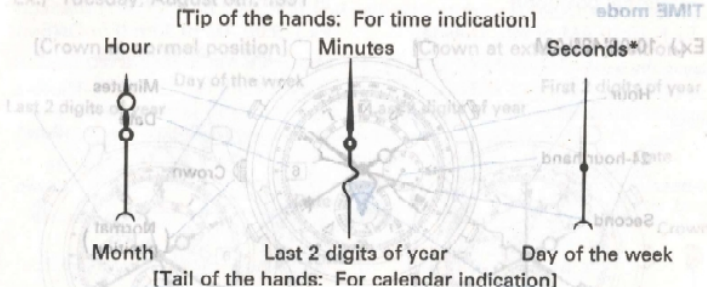


The mode changes by turning the crown at normal position clockwise or counterclockwise. The respective setting (and adjustment) modes are activated when the crown is pulled out.



### INDICATION OF THE HANDS

The tips indicate the time; the tails indicate month, year and day of the week.



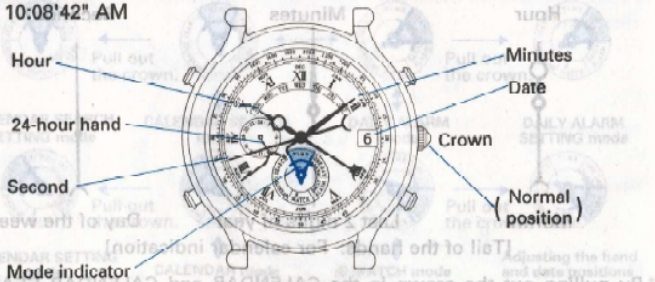
\* By pulling out the crown in the CALENDAR and CALENDAR SEARCH modes, the tip of the second hand moves to indicate the first 2 digits of the year.

Note: The design of the hands may differ slightly from model to model.

• Whether to read the tip or the tail depends on the mode used. Refer to the illustrations below.

**TIME mode**

Ex.) 10:08'42" AM



**ONE-DAY ALARM and DAILY ALARM modes**

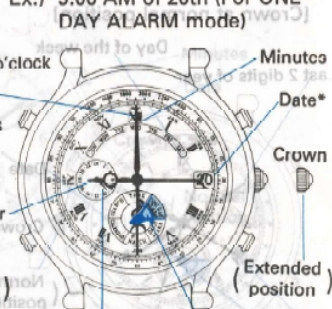
[Current time (crown at normal position)]

Ex.) 10:10 AM of 6th, Tuesday



[Designated alarm time (crown at extended position)]

Ex.) 9:00 AM of 20th (For ONE-DAY ALARM mode)



\* In the DAILY ALARM mode, the current date remains shown even if the

1. Pull out the crown.
2. Press "B", "A" and "C" repeatedly but separately to reset the tips of the hour, minute and second hands to the 12 o'clock position, respectively.
  - \* The hands move quickly if the respective buttons are kept pressed for 2 seconds.
  - \* The 24-hour hand moves correspondingly with the hour hand. When resetting the hour hand to the 12 o'clock position, check that the 24-hour hand indicates "24"
3. Press "D" to put the date to the center of the calendar frame.
  - \* By pressing "D", the date moves back and forth repeatedly.
  - \* The date moves quickly if "D" is kept pressed for 2 seconds.
4. Push the crown back in to the normal position.

3. Press "B" repeatedly to set the tip of the hour hand to the desired hour. It advances one hour with each press of the button.
  - \* The hand moves quickly if the button is kept pressed for 2 seconds.
  - \* The minute hand will not move if "B" is pressed.
  - \* The 24-hour hand turns a full circle in 24 hours and moves correspondingly with the hour hand. When setting the hour hand, check that the 24-hour hand is correctly set.
4. Push the crown back in to the normal position in accordance with a time signal.

**CALENDAR**

• Turn the crown to set the mode indicator to "CALENDAR". The tails of the hour, minute and second hands indicate month, last 2

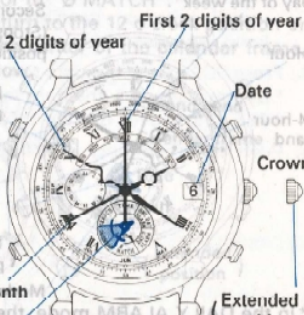
**CALENDAR and CALENDAR SEARCH modes**

Ex.) Tuesday, August 6th, 1991

[Crown at normal position]



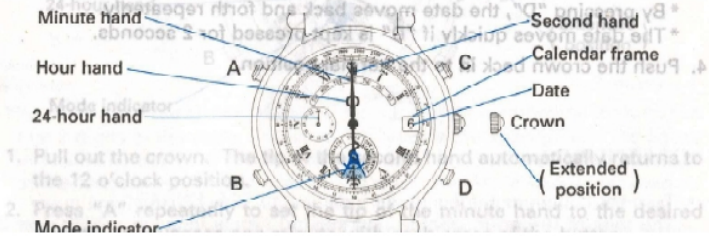
[Crown at extended position]



**ADJUSTING THE HAND AND DATE POSITIONS**

Before setting the time and calendar, be sure to use the MATCH mode to check that the hour, minute and second hands are in the 12 o'clock position and that the date numeral appears at the center of the calendar frame.

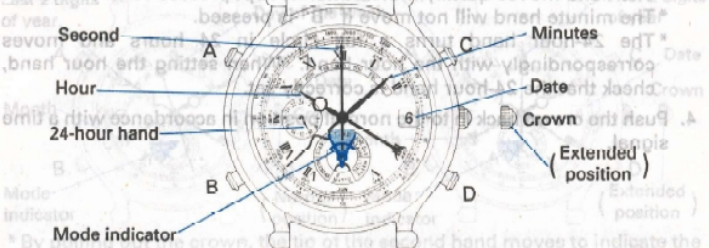
• Turn the crown to set the mode indicator to "MATCH". If any of the tips of the hands do not return to the 12 o'clock position or the date numeral does not appear at the center of the calendar frame, reset them following the procedure below:



**TIME SETTING**

• Turn the crown to set the mode indicator to "TIME".

Ex.) 10:08'00" AM

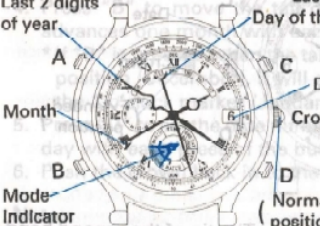


1. Pull out the crown. The tip of the second hand automatically returns to the 12 o'clock position.
2. Press "A" repeatedly to set the tip of the minute hand to the desired

**How to read the calendar**

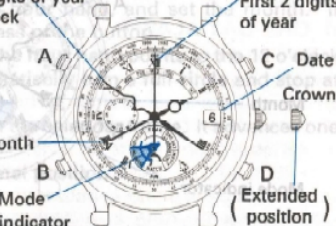
[Crown at the normal position]

Ex.) Tuesday, August 6th, 1991



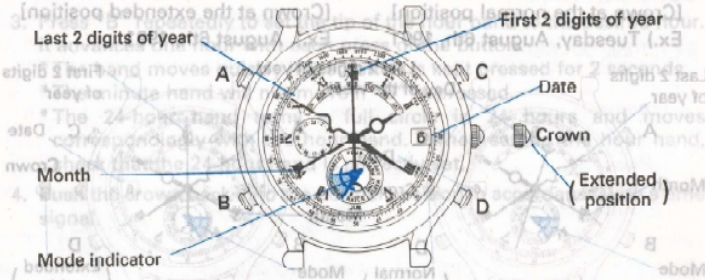
[Crown at the extended position]

Ex.) August 6th, 1991



\* By pulling out the crown, the tip of the second hand moves to indicate the first 2 digits of the year. Therefore, the year is the aggregate of the figure indicated by the tip of the second hand and the figure indicated by the tail of the minute hand. The year in the example above should be read as "1991" (1900 + 91).  
 \* The month is represented by the hour marker. The 1 o'clock marker

## Calendar setting



1. Pull out the crown in the CALENDAR mode. The tip of the second hand indicates the first 2 digits of the year.
2. Press "C" repeatedly to advance the tip of the second hand, and set the first 2 digits of the year. It advances one hundred years with each press of the button.
- \* If "C" is pressed when the second hand indicates "2400". It will

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position, the calendar will automatically be set to the first day of the next month (March 1st).

## ALARM

### 1) ONE-DAY ALARM

- The one-day alarm can be set to ring once at a designated time and date within a month. It can be set on a 24-hour basis.
- \* If the alarm is set to ring on the dates below, it may ring on the designated date of the next month.
  - 31st of months with 30 or fewer days
  - 29th, 30th or 31st of February (30th and 31st in leap years)
- \* Once set, the alarm is automatically engaged and cannot be canceled.
- \* After having rung at a designated time, the alarm is automatically disengaged and will not ring again unless newly set.
- \* The alarm rings in any mode, but it will not ring if the crown is at the extended position.
- Turn the crown to set the mode indicator to "ONE DAY ALARM". The tips of the hour and minute hands indicate the current time, the tail of the second hand indicates the day of the week and the current date appears

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3. Press "B" repeatedly to set the tip of the hour hand to the desired hour. It advances one hour with each press of the button.
  - \* The minute hand will not move if "B" is pressed.
  - \* The 24-hour hand moves correspondingly with the hour hand. Check that the 24-hour hand is set correctly.
4. Press "C" and "D" to set the date numeral. With each press of "C", the date moves back one day. With each press of "D", it advances one day.
5. Push the crown back in to the normal position.
  - \* The hands and date will indicate the current time and date.

**Note:** The hands and date move quickly if the respective buttons are kept pressed for 2 seconds.

- The alarm rings at the designated time for 20 seconds. To stop it manually, press "A", "B", "C" or "D".
- To set the alarm for the same time and date the following month, pull out the crown and push it back in to the normal position in the ONE-DAY ALARM mode, preferably just after the alarm has rung but not later than midnight of that day. If the crown is pulled out and pushed back in later than this, the current day and date will replace those previously set

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1. Pull out the crown.
  - \* The tip of the second hand will return to the 12 o'clock position, and the tips of the hour and minute hands indicate the one-day alarm time you have set.
2. Push back the crown in to the normal position.
  - \* While the date numeral is moving to indicate the current date, button operation is not possible.

### 2) DAILY ALARM

- The daily alarm can be set to ring regularly at a designated time of day. It is set on a 24-hour basis and rings once a day.
- Turn the crown to set the mode indicator to "DAILY ALARM". The tips of the hour and minute hands indicate the current time, the tail of the second hand indicates the day of the week and the current date appears in the calendar frame.

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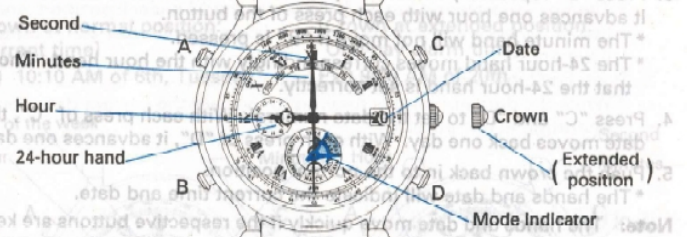
3. Press "A" to move the tail of the minute hand, and set the last 2 digits of the year. It advances one year with each press of the button.
  - \* If "A" is pressed when the tail of the minute hand indicates "99", it will automatically return to "00".
4. Press "B" to move the tail of the hour hand, and set the month. It advances one month with each press of the button.
  - \* If "B" is pressed when the tail of the hour hand points to the 12 o'clock position (December), it will automatically turn a full circle and stop at the 1 o'clock marker (January).
5. Press "D" to set the date numeral in the calendar frame. It advances one day with each press of the button.
6. Push the crown back in to the normal position.

### Notes:

1. Once the date, month and year are set, the day of the week is automatically set.
2. The hands and date numeral advance quickly if the respective buttons are kept pressed for 2 seconds.
3. The calendar automatically adjusts for odd and even months including February of leap years from 1400 to 2499. If a nonexistent day (e.g.

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## One-day alarm setting

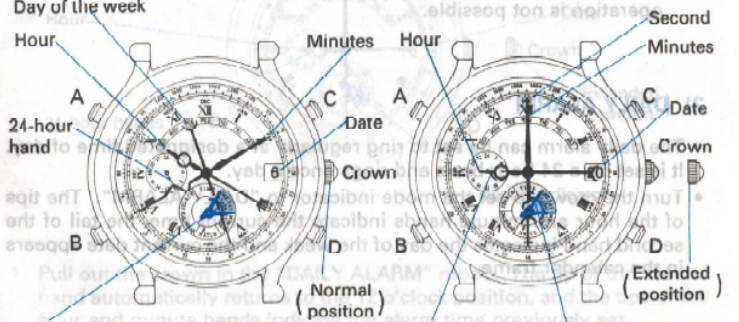


1. Pull out the crown in the "ONE-DAY ALARM" mode. The tip of the second hand automatically returns to the 12 o'clock position and the tips of the hour and minute hands indicate the alarm time previously set.
  - \* If the one-day alarm has already been set and engaged, the designated alarm date will appear in the calendar frame. Otherwise, today's date will appear.
2. Press "A" repeatedly to set the tip of the minute hand to the desired minute. It advances one minute with each press of the button.

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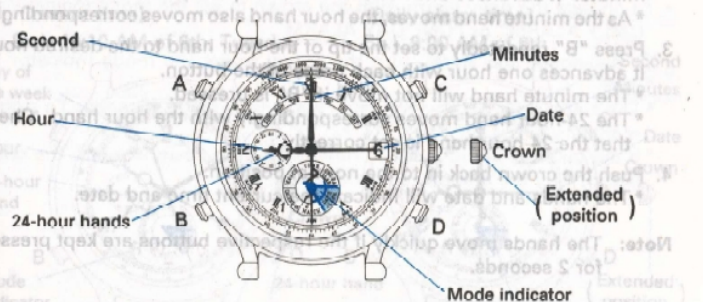
## How to check the one-day alarm time you have set

[Crown at normal position: Current time] [Crown at extended position: One-day alarm time]  
 Ex.) 10:10 AM of 6th, Tuesday Ex.) 9:00 AM of 20th



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## Daily alarm setting



1. Pull out the crown in the "DAILY ALARM" mode. The tip of the second hand automatically returns to the 12 o'clock position, and the tips of the hour and minute hands indicate the alarm time previously set.

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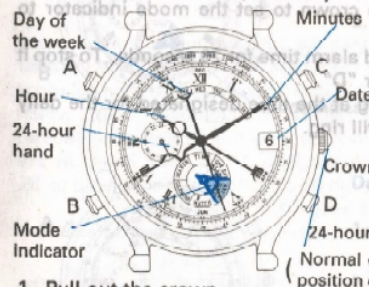
- Press "A" repeatedly to set the tip of the minute hand to the desired minute. It advances one minute with each press of the button.
  - \* As the minute hand moves, the hour hand also moves correspondingly.
- Press "B" repeatedly to set the tip of the hour hand to the desired hour. It advances one hour with each press of the button.
  - \* The minute hand will not move if "B" is pressed.
  - \* The 24-hour hand moves correspondingly with the hour hand. Check that the 24-hour hand is set correctly.
- Push the crown back in to the normal position.
  - \* The hands and date will indicate the current time and date.

**Note:** The hands move quickly if the respective buttons are kept pressed for 2 seconds.

### How to check the daily alarm time you have set

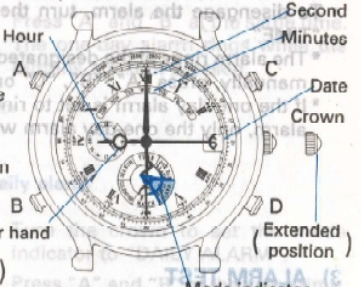
[Crown at normal position: Current time]

Ex.) 10:10 AM of 6th, Tuesday



[Crown at extended position: Daily alarm time]

Ex.) 9:00 AM of 6th



- Pull out the crown.

\* The tip of the second hand will return to the 12 o'clock position, and the tips of the hour and minute hands indicate the daily alarm time you have set.

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### Daily alarm engagement/disengagement

- To engage the daily alarm, turn the crown to set the mode indicator to "DAILY ALARM" or "ONE DAY ALARM".
- To disengage the alarm, turn the crown to set the mode indicator to "TIME".
  - \* The alarm rings at the designated alarm time for 20 seconds. To stop it manually, press "A", "B", "C" or "D".
  - \* If the one-day alarm is set to ring at the time designated for the daily alarm, only the one-day alarm will ring.

### 3) ALARM TEST

The one-day alarm and daily alarm ring differently. They can be tested in the following way.

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### One-day alarm

- Turn the crown to set the mode indicator to "ONE DAY ALARM".
- Press "A" and "B" at the same time. The one-day alarm rings while the buttons are kept pressed.

### Daily alarm

- Turn the crown to set the mode indicator to "DAILY ALARM".
- Press "A" and "B" at the same time. The daily alarm rings while the buttons are kept pressed.

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### CALENDAR SEARCH

- By setting the date, month and year from January 1, 1400 to December 31, 2499, the day of the week of the designated date will be indicated by the tail of the second hand.

**Note:** The calendar of the watch follows the Julian calendar from January 1, 1400 to October 4, 1582 and the Gregorian calendar from October 15, 1582 to December 31, 2499. This is because the Julian calendar was revised to the Gregorian calendar on October 4, 1582, which corresponds to October 14 according to the Gregorian calendar. Therefore, if a date from October 5 to 14 of 1582 is set in the CALENDAR SEARCH mode, it will be automatically advanced to 15, and "Friday" will be indicated as the day of the week.

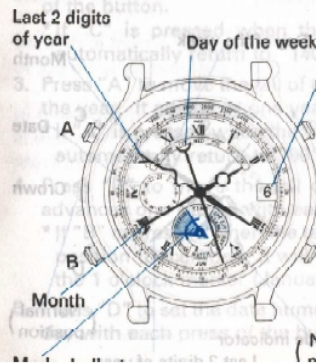
- \* The year when the Gregorian calendar was adopted differs from country to country.
- Turn the crown to set the mode indicator to "SEARCH". The tails of the hour, minute and second hands indicate the current month, last 2 digits of the year and day, respectively.

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### How to read the calendar in "CALENDAR SEARCH" mode.

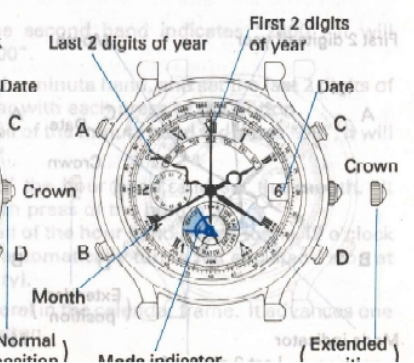
[Crown at normal position]

Ex.) Tuesday, August 6th, 1991



[Crown at extended position]

Ex.) August 6th, 1991



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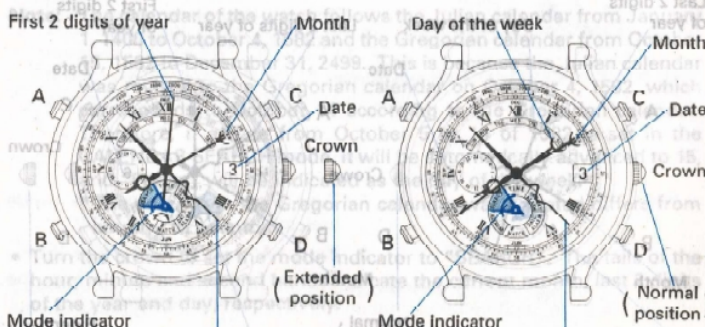
### How to use the calendar search function

[Crown at extended position]

Ex.) February 3rd, 2035

[Crown at normal position]

Ex.) Saturday, February 3rd, 2035



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- Pull out the crown in the CALENDAR SEARCH mode. The tip of the second hand indicates the first 2 digits of the year.
- Press "C" repeatedly to advance the tip of the second hand, and set the first 2 digits of the year. It advances one hundred years with each press of the button.
  - \* If "C" is pressed when the second hand indicates "2400", it will automatically return to "1400".
- Press "A" to move the tail of the minute hand, and set the last 2 digits of the year. It advances one year with each press of the button.
  - \* If "A" is pressed when the tail of the minute hand indicates "99", it will automatically return to "00".
- Press "B" to move the tail of the hour hand, and set the month. It advances one month with each press of the button.
  - \* If "B" is pressed when the tail of the hour hand points to the 12 o'clock position (December), it will automatically turn a full circle and stop at the 1 o'clock marker (January).
- Press "D" to set the date numeral in the calendar frame. It advances one day with each press of the button.

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6. Push the crown back in to the normal position. The tail of the second hand will indicate the day of the week of the designated date.

**Notes:**

1. The hands and date numeral advance quickly if the respective buttons are kept pressed for 2 seconds.
2. If a nonexistent day (e.g. February 30th) is set and the crown is pushed back in to the normal position, the calendar will automatically be set to the first day of the next month (March 1st).
3. Once the mode is changed over to another, the calendar designated in the CALENDAR SEARCH mode is no longer retained. When the mode is changed over to the CALENDAR SEARCH again, the hands will indicate the current calendar.

1. Pull out the crown.
2. Keep "A", "B", "C" and "D" pressed at the same time for 3 seconds. When the buttons are released, a beep sounds and the hands turn a full circle once or twice.
3. Press "B", "A" and "C" repeatedly but separately to reset the tips of the hour, minute and second hands to the 12 o'clock position, respectively.
  - \* The hands move quickly if the respective buttons are kept pressed for 2 seconds.
  - \* The 24-hour hand moves correspondingly with the hour hand. When resetting the hour hand to the 12 o'clock position, check that the 24-hour hand indicates "24".
4. Press "D" to put the date to "1". With each press of "D", the date moves slightly.
  - \* The date moves quickly if "D" is kept pressed for 2 seconds.
5. Push the crown back in to the normal position.
6. Turn the crown to set the mode indicator to "TIME" to set the desired time. (Refer to "TIME SETTING".)
7. Turn the crown to set the mode indicator to "CALENDAR" to set the

**TO PRESERVE THE QUALITY OF YOUR WATCH**

**WATER RESISTANCE**



**Non-water resistance**

If "WATER RESISTANT" is not inscribed on the case back, your watch is not water resistant, and care should be taken not to get it wet as water may damage the movement. If the watch becomes wet, we suggest that you have it checked by an AUTHORIZED SEIKO DEALER or SERVICE CENTER.



**Water resistance (3 bar)**

If "WATER RESISTANT" is inscribed on the case back, your watch is designed and manufactured to withstand up to 3 bar, such as accidental contact with splashes of water or rain, but it is not designed for swimming or diving.



**Water resistance (10 bar/15 bar)**

If "WATER RESISTANT 10 BAR" or "WATER RESISTANT 15 BAR" is inscribed on the case back, your watch is designed and manufactured to withstand up to 10 bar/15 bar and is suitable for swimming and shallow diving, but not for scuba diving. We recommend that you wear a SEIKO Diver's watch for scuba diving. If used in sea water, rinse the watch in fresh water and dry it completely. Do not operate the crown and buttons in water.



**CHEMICALS**

Be careful not to expose the watch to solvents (e.g., alcohol and gasoline), mercury (i.e., from a broken thermometer), cosmetic spray, detergents, adhesives or paints. Otherwise, the case, bracelet, etc. may become discolored, deteriorated or damaged.



**CARE OF CASE AND BRACELET**

To prevent possible corrosion of the case and bracelet caused by dust, moisture and perspiration, wipe them periodically with a soft dry cloth.



**PRECAUTION REGARDING CASE BACK PROTECTIVE FILM**

If your watch has a protective film and/or a sticker on the case back, be sure to peel them off before using your watch. Otherwise, perspiration getting in under them may rust the case back.



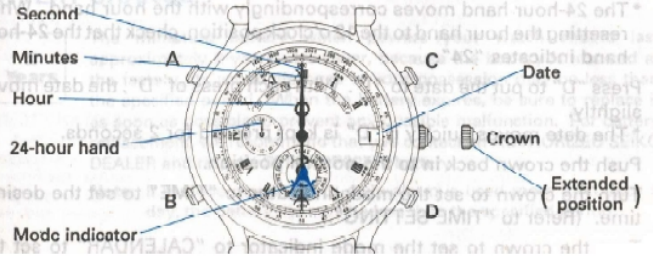
**PERIODIC CHECK**

It is recommended that the watch be checked once every 2 to 3 years. Have your watch checked by an AUTHORIZED SEIKO DEALER or SERVICE CENTER to ensure that the case, crown, buttons, gasket and crystal seal remain intact.

**NECESSARY PROCEDURE AFTER BATTERY CHANGE**

When the battery is replaced, the information stored in the IC does not correspond with the time and date actually displayed. Before using the watch, therefore, be sure to reset the tips of the hands to the 12 o'clock position and put the date numeral "1" to the center of the calendar frame, following the procedure below.

- Turn the crown to set the mode indicator to "Ø MATCH".



**BATTERY LIFE INDICATOR**

The battery needs to be replaced when you see the second hand moving at two-second intervals instead of normal one-second intervals. The watch will, however, remain accurate while the second hand is moving at two-second intervals.

**BATTERY CHANGE**



The miniature battery which powers your watch should last approximately 2 years. However, because the battery is inserted at the factory, its actual life once in your possession may be less than the specified period. When the battery expires, be sure to replace it as soon as possible to prevent any possible malfunction. For battery replacement, we recommend that you contact an AUTHORIZED SEIKO DEALER and request SEIKO SR927W battery.

**Note:** If the one-day alarm or daily alarm is used more than once a day, the battery life may be less than the specified period.

**NOTE:**

Pressure in bar is a test pressure and should not be considered as corresponding to actual diving depth since swimming movement tends to increase the pressure at a given depth. Care should also be taken on diving into water.

**TEMPERATURES**



Your watch works with stable accuracy between a temperature range of 5°C and 35°C (41°F and 95°F). Temperatures over 60°C (140°F) may cause battery leakage or shorten the battery life. Do not leave your watch in very low temperatures below -10°C (+14°F) for a long time since the cold may cause a slight time loss or gain. However, the above conditions will be corrected when the watch returns to normal temperature.



**SHOCKS & VIBRATION**

Light activities will not affect your watch, but be careful not to drop your watch or hit it against hard surfaces, as this may cause damage.



**MAGNETISM**

Your watch will be adversely affected by strong magnetism. Keep it away from close contact with magnetic objects.

**SPECIFICATIONS**

1. Frequency of crystal oscillator ..... 32,768 Hz (Hz = Hertz ... Cycles per second)
2. Loss/gain (monthly rate) ..... Less than 15 seconds at normal temperature range (5°C ~ 35°C) (41°F ~ 95°F)
3. Operational temperature range ..... -10°C ~ +60°C (14°F ~ 140°F)
4. Driving system ..... Step motor, 4 pieces
5. Display system
  - "TIME" ..... Hour, minute, second and date
  - "ONE DAY ALARM" ..... Hour, minute, date and day
  - "DAILY ALARM" ..... Hour, minute, date and day
  - "CALENDAR" ..... Year, month, date and day
  - "SEARCH" ..... Year, month, date and day
  - "Ø MATCH" ..... Adjusting the hand and date positions
6. Battery ..... SEIKO SR927W, 1 piece
7. IC (Integrated Circuit) ..... C-MOS-LSI, 1 piece

\* The specifications are subject to change without prior notice, for product improvement.