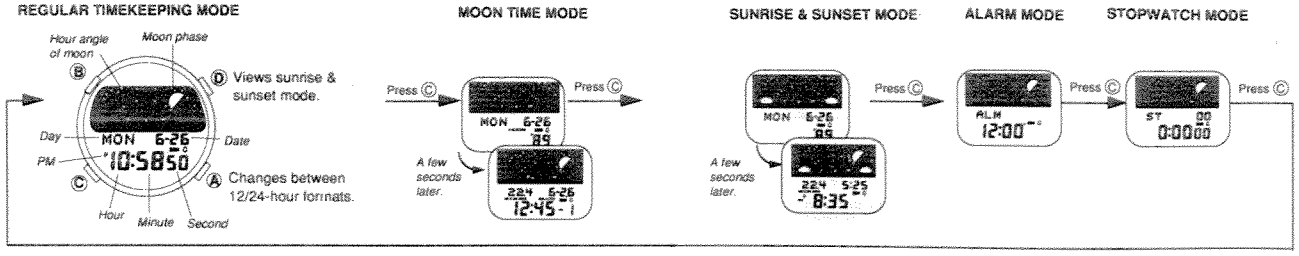
Module No. 832

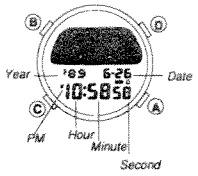
READING THE DISPLAY



The watch reverts to regular timekeeping mode when Ⓒ button is pressed after operation, regardless of mode.

Demonstration display
Press Ⓒ for a few seconds to start demonstration.
Press any button to stop.

SETTING TIME AND DATE



1) Press Ⓑ in the regular timekeeping mode to set correct time.
2) Press Ⓐ with a time tone to correct seconds.
3) Press Ⓒ to shift flashing digit(s).
Digit(s) to be changed will flash.

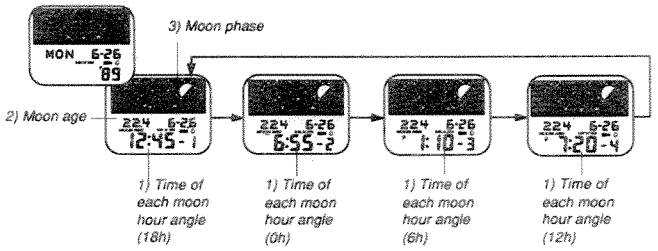
SECOND → HOUR → MINUTE → YEAR → MONTH → DATE → DAY

4) Each press of Ⓐ increases digit by one.
Hold down for rapid advance.
5) Press Ⓑ to complete setting.

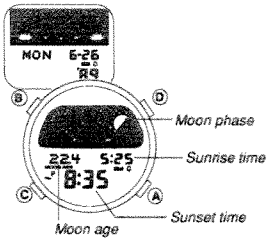
NOTE:
If you use any other mode within 30 seconds while the calculation is carried out, your new entries may fail to be inputted.
(This operation, however, should never damage your watch).

SETTING LOCATION DATE

Press Ⓒ to get to the moon time mode from regular timekeeping mode. Wait a few seconds and the display automatically starts to show the following:
1) time of each moon hour angle, alternatively between 0h, 6h, 12h and 18h, 2) moon age, 3) moon phase.



USING SUNRISE & SUNSET MODE

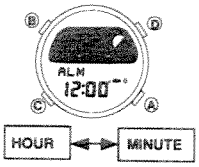


A few seconds after pressing Ⓒ twice in the regular timekeeping mode, the display will move to the sunrise & sunset mode. The display shows sunrise time, sunset time, moon age, and moon phase for the date indicated in the time mode. When sunrise, sunset, and moon age data for other dates is required, press Ⓐ or Ⓓ in this mode to obtain the required date. Hold down for rapid advance. When required date has been set, the display will show sunrise, sunset, and moon age data for this date after approx. 20 seconds.

PRECAUTION FOR SUNRISE & SUNSET MODE

- The sunrise or sunset time is that of the surface at 0 meter sea level. (So, it is notable that the sunrise or sunset time displayed may include an error depending on where you are).
- Minimum display unit is: approx ±5 minutes where is at less than 50° in latitude and approx. ±10 minutes at 50° or more in latitude.
- Sunrise & sunset time is indicated by 5 minutes unit.

USING DAILY ALARM



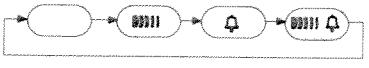
The alarm beeper will sound for 20 seconds every day the preset time until cleared when daily alarm is set. Press any button to stop beeper.
A signal will sound every hour on the hour if time signal is set.

Sound demonstration Press and hold Ⓐ in alarm mode to sound beeper.

1) Press Ⓑ in the alarm mode to set new alarm time.
2) Each press of Ⓒ shifts the flashing position.
3) Pressing Ⓐ increase digit by one. Hold down for rapid advance.
4) Press Ⓑ to complete.

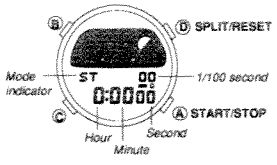
Display automatically returns to initial alarm mode display if left unused for a few minutes.

On or off setting of alarm and time signal
In the alarm mode, each push of Ⓓ button will change alarm ON/OFF as follows.



appears when alarm is ON.
appears when time signal is ON.

USING STOPWATCH



A signal confirms each button operation.

Working range
Total elapsed time display is limited to 23 hours 59 minutes 59.99 seconds. Thereafter it will be automatically reset and started again.

NET TIME MEASUREMENT
Ⓐ START → Ⓐ STOP *(Time loss)* → Ⓐ RE-START → Ⓐ STOP → Ⓓ RESET

SPLIT TIME MEASUREMENT
Ⓐ START → Ⓓ SPLIT → Ⓓ SPLIT RELEASE → Ⓐ STOP → Ⓓ RESET

1ST-2ND PLACE TIMES
Ⓐ START → Ⓓ SPLIT (The first runner finishes.) → Ⓐ STOP (The second runner finishes. Record the time of the first runner.) → Ⓓ SPLIT RELEASE (Record the time of the second runner.) → Ⓓ RESET

Tips .....

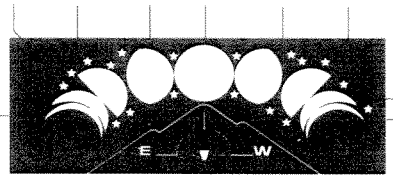
- Various moon phase data informations for a specification can be calculated by inputting of longitude, latitude and time difference from GMT. Therefore correct entries are necessary.
  For world time zones, see the time zone chart booklet attached.
- When summer time adjustment is made, don't forget to adjust time difference from GMT.
- When location is changed, new location data should be inputted to get correct moon time information.
- When the watch shows wrong moon phase data information compared with actual observed values, or estimated values by public authorities, check entries in the following order: year setting, time difference from GMT, LONGITUDE, LATITUDE, EAST OR WEST, NORTH OR SOUTH.

MOON GRAPH DISPLAY

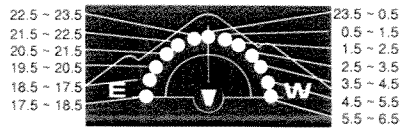
In the upper section of the watch's display, the approximate shape of the moon is shown.
They are represented as viewed looking south at the moon.
An approximation of the changing "hour angle of the moon" is graphically displayed.

Moon Age

Moon Phase	New Moon (0.0)		First Quarter (7.4)		Full Moon (14.8)		Last Quarter (22.1)		New Moon (29.5)
Moon age	0.0 ~ 1.8	1.9 ~ 5.5	5.6 ~ 9.2	9.3 ~ 12.9	13.0 ~ 16.6	16.7 ~ 20.2	20.3 ~ 23.9	24.0 ~ 27.6	27.7 ~ 29.5



Moon angle



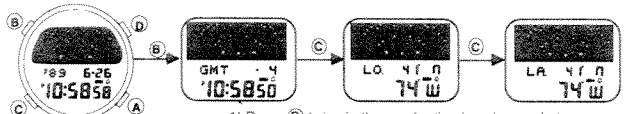
Angle of moon

The hour angle of moon tells in what direction the moon is seen.

Example

In the example at left, the moon has passed the meridian. If you look above the moon near the equator, the moon is seen at west . In Northern hemisphere the moon is seen at west from the south. In Southern hemisphere, the moon is seen at west from the north.

USING MOON TIME MODE



Press Ⓓ

180°E ⇄ 0°E ⇄ 179°W

Press Ⓐ

Press Ⓓ

65°N ⇄ 0°N ⇄ 65°S

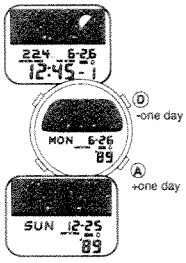
Press Ⓐ

For world time zones, see the time zone chart booklet attached.

1) Press Ⓑ twice in the regular timekeeping mode to set new location data.
   Set time difference from GMT, longitude and latitude.
2) Press Ⓐ to advance hour.*
3) Press Ⓒ to set longitude.
   Press Ⓐ or Ⓓ to change the longitude digits.*
4) Press Ⓒ to set latitude.
   Press Ⓐ or Ⓓ to change the latitude digits.*
   *Hold down for a few seconds for rapid advance.
5) Press Ⓑ to complete.

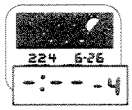
The display automatically returns to the regular timekeeping mode, if left unused for a few minutes.

***NOTE:** If you use any other mode within 30 seconds while the calculation is carried out, your new entries may fail to be inputted. (This operation, however, should never damage your watch.)*



If the moon times on other days are required, press Ⓐ (+ one day) or Ⓓ (- one day) in the moon time mode to set the required date. Hold down for rapid advance. When the required date is correctly set, wait approx. 20 seconds. The display will automatically show the following data for the required date: 1) time of each moon hour angle, alternatively between 0h, 6h, 12h and 18h, 2) moon age, 3) moon phase.

* As the value of moon hour angle is based on the movement of the moon and not the sun, the fourth fishing time data (for 18h) may be missed. In such a case, the display will appear as below:



***NOTE:** Moon time is indicated by 5 minutes unit.*