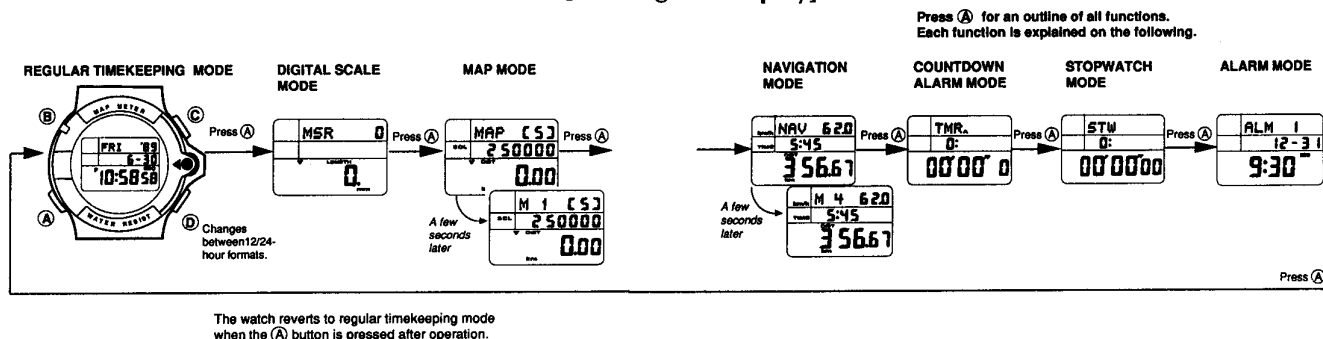
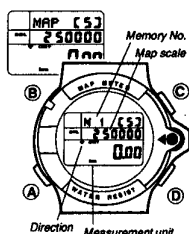


Module No. 693

[Reading the display]

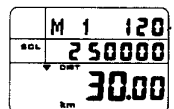


[Using mapmeter mode]



5 Preset scales:

Scale	Unit
SCALE 1	1 (unit:mm)
SCALE 2	10000 (unit:km)
SCALE 3	50000 (unit:km)
SCALE 4	100000 (unit:km)
SCALE 5	250000 (unit:km)



Automatic conversion is:
 120 x 250000 x 1/1000000
 = 30 km
 120: measured length(mm)
 250000: scale ratio
 1/1000000:
 value corresponding to 1mm.

In the MAPMETER MODE, actual distances can be measured on maps using a variety of scales. Up to 10 measured values can be stored in the memory, and those can be used in the NAVIGATION MODE after mentioned.

Measuring the length on the map

- From the REGULAR TIMEKEEPING MODE, press (A) twice to select the MAPMETER MODE.
- The 5 scales are already stored in scale memories [1]-[5]. Press (D) until your desired scale is shown. When the desired map scale is not included, see "Inputting map scale value."
- Hold down (C) to determine the measurement direction. The direction will be indicated by ▲ or ▼.
- To measure the length, turn the roller 180° counterclockwise so that the roller is set to the measurement position. Make sure the roller is turned until it locks firmly.
- Press (C) and the ▲ or ▼ mark blinks indicating that the watch is ready to measure the length.
- Place the roller against the surface to be measured and trace slowly. The measured length is shown at the upper right of the display. The length will be measured first in millimeters and then converted to the selected unit at the bottom of the display.
- Press (C) to complete the measurement. (the ▲ or ▼ mark will stop blinking.)
- To store a measured distance, press (D) until the beeper sound stops.* Or press (B) to clear displayed numerical values.

* Up to 10 measurement results can be stored in memory. When the memory is full, measurements can be made but the results would not be stored in memory. See "NAVIGATION MODE" to erase the stored data.

Inputting map scale unit

You can replace one of the preset scale with the new scale.

- Press (D) and select one of the scale memories to be erased.
 - Press (B) to input the new scale.
 - Press (C) or (D) to select the measurement unit, then input the map scale.
- nm: nautical miles mm: millimeter cm: centimeter
 m: meter km: kilometer in: inches
 ft-in: feet-inches mi: miles
- Press (A) and the scale numerical value will blink.
 - Each press of (C) or (D) changes the digit.
 - Press (A) to shift flashing digit(s). Digit(s) to be changed will flash.
 - Press (B) to complete.

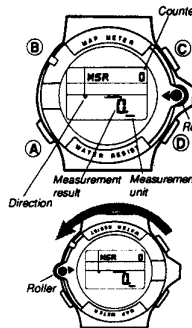
Setting scales by an actual length

Even if a scale figure is not indicated on a map, as long as there is an index indicating what a fixed distance on the map represents in terms of actual distance, by using a roller to measure that index, the scale can be automatically calculated and determined.

- From the REGULAR TIMEKEEPING MODE, press (A) twice to select the MAPMETER MODE.
- Press (B) twice to set the measuring scale.
- Press (C) or (D) to set the measurement unit:
- Input of distance value: press (A) to shift flashing digit(s). Digit(s) to be changed will flash.
- Each press of (C) or (D) changes the digit. Hold down for rapid movement.
- Measurement of index length: press (C) and the ▲ or ▼ mark blinks indicating that you can measure the length on the map using the roller. Measure the length on the map.
- Press (B) to complete. The calculated scale will be displayed.

[Using digital scale mode]

Length can be measured by tracing the roller over objects.



- Press (A) in the REGULAR TIMEKEEPING MODE to enter the DIGITAL SCALE MODE.
- Press (D) to select the measurement unit. Continue to press (D) until the desired unit is shown. The unit will advance in the following order: mm, cm, meter, inches, and feet-inches.
- Hold down (C) to determine the measurement direction. The direction will be indicated by ▲ or ▼.
- To measure the length, turn the roller 180° counterclockwise so that the roller is set to the measurement position. Make sure the roller is turned until it locks firmly.
- Press (C) and the ▲ or ▼ mark blinks indicating that the watch is ready to measure the length.
- Place the roller against the surface to be measured and trace slowly. The measured length is shown at the upper right of the display. The length will be measured first in millimeters and then converted to the selected unit at the bottom of the display.
- Press (C) to complete the measurement. (the ▲ or ▼ mark will stop blinking.)
- Press (D) to convert to a different unit.
- Press (B) to clear the measurement result.

- If the roller is moved to the reverse direction, the length will be measured in minus value.
- Further measurement will be added to the result unless (B) is pressed to clear.
- The measurement ranges are 0mm — 9.99m — 9.99m and 0 inch — 32 feet, 9 inches (from 0 — 9999 counts). When the measurement exceeds the range, the count will restart from 0.

PRECAUTIONS

- Carry out measurement while holding the bezel with your finger.
- Never move the roller too quickly. Carefully trace the map at a speed of approx. 10 cm per second or slower.
- Be sure to use the roller on the paper surface.
- Be noted that some spoor may remain on the map surface after the roller moves. So, avoid pressing the roller too forcibly onto the map not to damage the paper surface.
- If the roller is once in the seawater, rinse it with a normal water.
- Be careful so that any foreign matter comes into the roller. Should any abnormality occur with the roller due to any foreign matter inside, ask your Casio Service Center.
- Set the roller at the storing position when no measurement is needed.
- If the alarm or timer buzzer sounds while the watch is ready for measurement, the measurement automatically changes to OFF.

NOTE:

Sensor accuracy: Within 1mm of measurement
 (Skid, mishandling and other errors are ignored.)

[Using stopwatch]

A signal confirms each button operation.

Working range

Total elapsed time display is limited to 99 hours 59 minutes 59.99 seconds.

Thereafter it will be automatically reset and started again.

a) Net time measurement

(C) START (C) (Time loss) STOP (C) RESTART (C) STOP (C) RESET

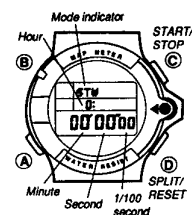
b) Split time measurement

(C) START (D) SPLIT (D) SPLIT (C) STOP (D) RESET

c) 1st-2nd place times

(C) START (D) SPLIT (C) STOP (D) SPLIT (D) RESET

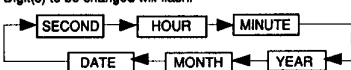
The first runner finishes. The second runner finishes. Record the time of the first runner. Record the time of the second runner.



[Setting time and date]



- Press (B) in the time display to set the correct time.
- Press (D) on a time signal to correct seconds.
- Press (A) to shift flashing digit(s). Digit(s) to be changed will flash.



- Each press of (C) or (D) changes the digit. Hold down for rapid advance.
- Press (B) to complete setting.

Display automatically returns to the time display if left unused for a few minutes.