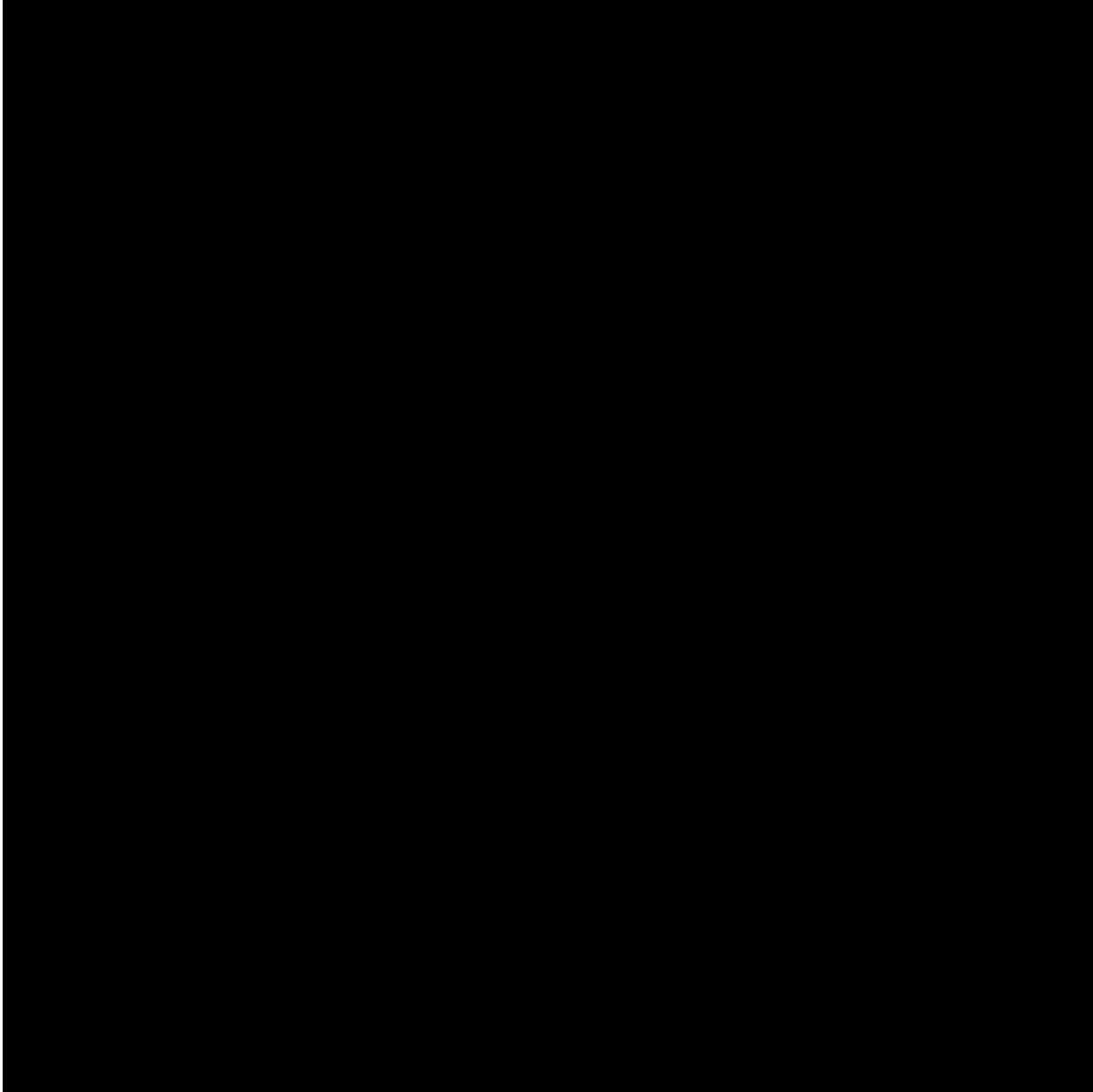




WATCH COLLECTION

NG770A / NG771A /
NG771C

INSTRUCTION
MANUAL





SETTING THE TIME

- 1) Pull the crown out to the time-setting position (2).
- 2) Turn the crown to set the hour and minute hands to the desired time.
- 3) Push the crown back to the normal position (1).

SETTING THE DATE

- 1) Pull the crown out to position 2.
- 2) Turn the crown counterclockwise until the previous day's date appears.
- 3) Push back the crown to the normal position (1).

USING SLIDE RULE

This rule is good for...

Multiplication

Division

Proportion

Square root

Time required

Fuel consumption

Estimated flight time

Other flying problems

Note: Use the control turning bezel located above the crown to move the outer scale. This scale cannot place a decimal point; therefore, the calculation of this watch should be used as a guide only.

(1) Time Required

Example: Obtain the time required for the flight of an aircraft at 180 knots for 450 nautical miles.

Operation: Align "18" on the outer scale with the SPEED INDEX on the inner scale. Then, "45" on the outer scale corresponds to "150.1" on the inner scale (time scale). Thus, the time required for the flight is 2 hours and 30 minutes.

(2) Knots (Air Speed)

Example: Obtain the knots (air speed) for 240 nautical miles with a flight time of 1 hour and 20 minutes.

Operation: Align "24" on the outer scale with "80" on the inner scale (time scale). Then, the SPEED INDEX on the inner scale corresponds to "18" on the outer scale. Thus, the air speed for the flight is 180 knots.

(3) Flight Distance

Example: Obtain the air distance when the air speed is 180 knots and the flight time is 40 minutes.

Operation: Align "18" on the outer scale with the SPEED INDEX on the inner scale. Then "40" on the inner scale corresponds to "12" on the outer scale. Thus, the air distance of the flight is 120 nautical miles.

(4) Rate of Fuel Consumption

Example: Obtain the rate of fuel consumption (gallons/hour) when the flight time is 30 minutes and the fuel consumption is 130 gallons.

Operation: Align "13" on the outer scale with "30" on the inner scale. Then the SPEED INDEX on the inner scale corresponds to "26" on the outer scale. Thus, the fuel consumption is 260 gallons an hour.

(5) Fuel Consumption

Example: Obtain the fuel consumption required for a flight when the fuel consumption is 236 gallons an hour and the flight time is 9 hours.

Operation: Align "23.6" on the outer scale with the SPEED INDEX on the inner scale. Then, "9:00" on the inner scale (time scale) corresponds to "35" on the outer scale. Thus, the fuel consumption is 3,500 gallons.

(6) Estimated Flight Time

Example: Obtain the estimated flight time when the fuel consumption is 260 gallons an hour and the aircraft has 650 gallons of fuel.

Operation: Align "26" on the outer scale with the SPEED INDEX on the inner scale. Then, "65" on the outer scale corresponds to "150" on the inner scale (time scale). Thus, the estimated flight time is 2 hours and 30 minutes.

(7) Difference in Altitude

The difference in altitude can be obtained from the rate of descent and the descent time.

Example: Obtain the difference in altitude when an aircraft continues descending for 20 minutes at a rate of 430 feet a minute.

Operation: Align "43" on the outer scale with "10" on the inner scale. Then, "20" on the inner scale corresponds to "86" on the outer scale. Thus, the difference in altitude is 8,600 feet.

(8) Rate of Climb (or Descent)

The rate of climb (or descent) can be obtained from the time required to reach an altitude.

Example: Obtain the rate of climb when an aircraft reaches an altitude of 7,500 feet after climbing for 25 minutes.

Operation: Align "75" on the outer scale with "25" on the inner scale. Then, "10" on the inner scale corresponds to "30" on the outer scale. Thus, the rate of climb is 300 feet a minute.

(9) Time of Climb (or Descent)

The time required for climb can be obtained from the altitude to be reached and the rate of climb (or descent).

Example: Obtain the time of climb when an aircraft is to climb to 6,300 feet at a rate of 390 feet a minute.

Operation: Align "39" on the outer scale with "10" on the inner scale. Then, "63" on the outer scale corresponds to "16" on the inner scale. Thus, the time of climb is 16 minutes.

(10) Conversion

Example: Convert 45 statute miles into nautical miles and kilometers.

Operation: Align "45" on the inner scale with STAT on the outer scale. Then, NAUT on the outer scale corresponds to "39" nautical miles on the inner scale and "KM" on the outer scale corresponds to "72" on the inner scale.

(11) Multiplication

Example: 39×20

Operation: Align "39" on the outer scale with "10" on the inner scale. Then, "20" on the inner scale corresponds to "78" on the outer scale. Take into account the position of the decimal point and add one zero to obtain 780. Note that with the watch scales, the position of the decimal point cannot be obtained.

(12) Division

Example: $900/47$

Operation: Align "90" on the outer scale with "47" on the inner scale. Then, "10" on the inner scale corresponds to "19.1" on the outer scale. Take into account the position of the decimal point to obtain 19.1.

(13) Proportion

Example: $30/10 = 60/x$

Operation: Align "30" on the outer scale with "10" on the inner scale. Then, "60" on the outer scale corresponds to "20" on the inner scale. At this point the proportion for every value and the inner and outer scales is 30:10.

(14) Square Root

Example: Square root of 900

Operation: Turn the outer scale slowly and find a value that corresponds to both 90 on the inner scale and 10 on the outer scale. In this example, "90" on the inner scale corresponds to "30" on the outer scale and "10" on the outer scale corresponds to "30" on the inner scale, thus the answer is 30.

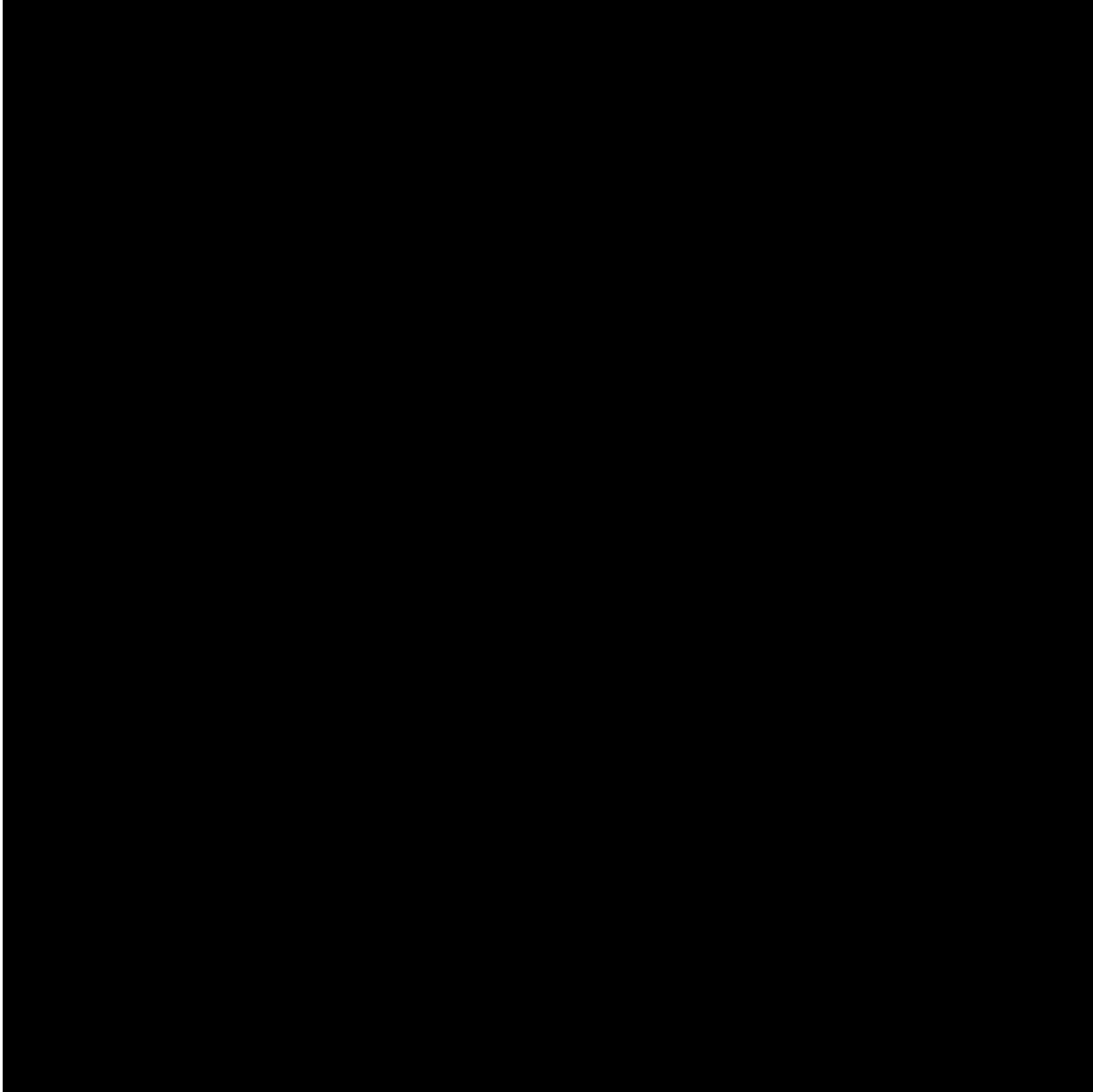
(15) Currency Operation

Example: Convert 35 Swiss Franc (CHF) into Euro. The exchange rate is 1.4 CHF to 1 Euro; therefore, 14 CHF converts to 10 Euro.

Operation: Align "14" on the outer scale with "10" on the inner scale. Then, "35" on the outer scale corresponds to "25" on the inner scale. Thirty-five CHF is equivalent to 25 Euro. All values on the inner scale correspond with the outer scale; CHF to EUR (or other currency).

TECHNICAL DATA

Movement	Solar quartz 10 ½"
Solar cell type	Amorphous silicon solar cell
Secondary battery type	Titanium lithium ion
Secondary battery size	9.5 mm x 2.1 mm
Working time	Approx. 6 months (after fully charged)
Charging time	Approx. 3 hours (under 100 KLX sunlight)
	Approx. 120 hours (under 1000 LX fluorescent lamp)
Operating temperature range	-5° C to + 50° C
Water-resistance	10 ATM, 100 m





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