SANYO

A GREAT NAME IN ELECTRONICS

SANYO MINI ELECTRONIC CALCULATOR
ICC-80/D INSTRUCTION MANUAL

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R-4770232

CONTENTS

1. FEATURES

1. The LSIs used have been specially designed by Sanyo for this model, insuring unsurpassed reliability.

2. With the high performance LSIs, calculations of all types, from the basic four rules to successive divisions and multiplications, divisions and multiplications with a constant, mixed calculations, squaring and other calculations are possible. Positioning of the decimal point in the result is preselected. Operation, in short, is exactly the same as with conventional desk calculators.

3. Despite its ultra-small size, the MINI makes calculations of up to 16 digits possible.

4. A CADNICA rechargeable battery is incorporated in this model. It can be used in places with no electric power. The battery never needs replacing and cordless operation for 2 hours and half is possible.

5. Other special features of this model include:
   * • Error lamp which lights in cases of overflow and locks all keys (except the clear key).
   * When the result of a calculation contains more than 8 digits, the lamp lights indicating the use of the eight back-up digits.
   * When battery power is exhausted, a alarm lamp will light and warn you to recharge batteries.

2. NAME OF PARTS

AC adaptor (100V/120Vor 220V/240V)
(Power Supply)

100V/120V   220V/240V

Error (overflow) lamp

Digit carry lamp

Battery alarm lamp

Decimal point selector switch

Clear key

Clear all key

Digit replacement key

Numeric keys

ON-OFF switch

Multiplication key

Division key

Minus key

Plus equal key

Decimal point key
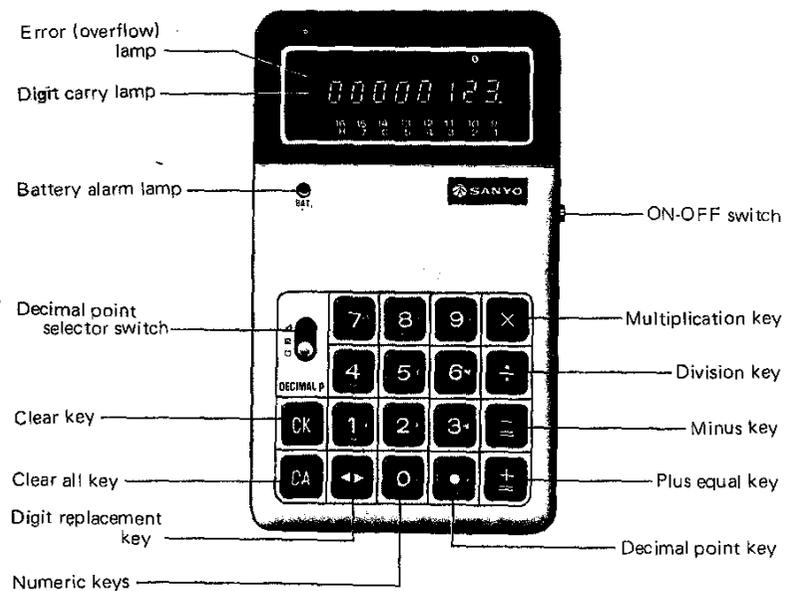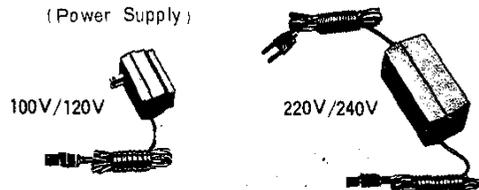
3. FUNCTION OF KEYS

Numeric keys

Depress these keys to register figures, beginning from the left-most numeral. The figures will be displayed and memorized by the calculator. With figures of over eight digits, the surplus digits disappear from the display indicator but are memorized.

CA

Clear All key

Clears the entire machine. This key should always be depressed after turning the machine on.

+ =

Plus-equal key

Depressing this key has the following effects:
With additions ..... the registered figure is added into the machine.
With multiplication and division ..... products and quotients are displayed.

=

Minus-equal key

Depressing this key has the following effects:
With subtractions ..... the registered figure is subtracted.
When the result is a negative number ..... the compliment is displayed. If this key is then depressed once again, the result is displayed as a true number.

×

Multiplication key

When multiplying, depress this key after registering the multiplicand. Then register the multiplier and depress the ⊡ key. The product will be displayed.

÷

Division key

When dividing, depress this key after registering the devidend. Then register the divisor and depress the ⊡ key. The quotient will be displayed.

Decimal point key

When registering figures which include a decimal point, depress this key at the appropriate place. The decimal point will be displayed in its correct position.
The position of a decimal point in the result is preselected by the decimal point selector switch.

Clear key

Depressing this key clears only the dispayed figures.

Digit replacement key

When figures of more than eight digits are entered, the surplus digits will disappear from the display indicator but are memorized by the calculator.
If you wish to check the surplus digits, depress this key and they will appear on the indicator.

Digit carry lamp

With results ..... when the result of a calculation contains more than eight digits, the ➡ lamp automatically lights, and the first part of the result is displayed. If the [◀▶] key is now depressed, the second eight digits are displayed.
The final result is obtained by reading the two sets together.

Error lamp

If overflow occurs, this lamp lights.

4. FUNCTION OF SWITCHES, METER, ETC.
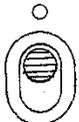
ON-OFF switch

Turning on the power
* Turn the power switch ON.
Turning off the power
* Turn the power switch OFF

Decimal point selector switch

The position of the decimal point in the result is preselected. Set the selector switch at the desired position. (For example: If the selector switch is set at 2, the result will be given to two decimal places.)
The switch can be set in three positions: (0, 2 and 4.)

Battery alarm lamp

This lamp shows the condition of the CADNICA rechargeable battery. For further derails, refer to the section on Battery Recharging.

5. BATTERY RECHARGING

1. The CADNICA battery is a rechargeable, small, hermetically sealed cell. It never needs replacing and is handy and economical in use.

2. Recharging procedure:
   * Insert adaptor AC plug into power socket.
   * Insert adaptor DC plug into three-pin socket as far as it will go.
   * Recharging takes place whether the power switch is ON or OFF i.e. Recharging is possible even when the calculator is in use.

3. Recharging time
   Recharging of totally exhausted batteries takes at least 15 hours at power switch off.

4. Battery alarm lamp

Lamp	Battery condition
Light off	Recharging unnecessary
Light on	Recharging absolutely necessary (Avoid cordless operation)

6. CALCULATIONS

BASIC CALCULATIONS

1. ADDITION

Ex. 1   456+789=1245

⁴₂₀◯ [CA] 456 [±] 789 [±] | 1245. |

Ex. 2   1234567.8+1.234=1234569.034

⁴₂₀◯ [CA] 1234567 [.] 8 [±] 1 [.] 234 [±]

➡ | 123 |

[⬛] | 4569.0340 |

Ex. 3   5.62+3.28+11.25+2.8=22.95

⁴₂₀◯ [CA] 5 [.] 62 [±] 3 [.] 28 [±] 11 [.] 25 [±] 2 [.] 8 [±]

| 22.95 |

2. SUBTRACTION

Ex. 1   456−123=333

⁴₂₀◯ [CA] 456 [±] 123 [⁼] | 333. |

Ex. 2   5 − 7 = − 2

⁴₂₀◯ [CA] 5 [±] 7 [⁼]   ➡ | 99999999 |

[⁼] | 2. |

Ex. 3   2 − 6 + 3 + 5 = 4

⁴₂₀◯ [CA] 2 [±] | 2. |

6 [⁼]   ➡ | 99999999 |

3 [±]   ➡ | 99999999 |

5 [±] | 4. |

3. MULTIPLICATION

Ex. 1 $123 \times 27 = 3321$

$$\begin{smallmatrix}4\\2\\0\end{smallmatrix}$$ 123 ⨯ 27 ± | 3321. |

Ex. 2 $1.2345 \times 9.8765 = 12.19253925$

ⓐ $\begin{smallmatrix}4\\2\\0\end{smallmatrix}$ 1 · 2345 ⨯ 9 · 8765 ± | 12. |

ⓑ $\begin{smallmatrix}4\\2\\0\end{smallmatrix}$ } Operation as for ⓐ | 12.19 |

ⓒ $\begin{smallmatrix}4\\2\\0\end{smallmatrix}$ | 12.1925 |

Ex. 3 $456 \times (-99) = -45144$

$$\begin{smallmatrix}4\\2\\0\end{smallmatrix}$$ 456 ⨯ 99 ± | 45144. |

NOTE: Operate the keys in this order and decide whether the result is positive or negative.

4. SUCCESSIVE MULTIPLICATION

Ex. 1 $3 \times 6 \times 9 = 162$

$$\begin{smallmatrix}4\\2\\0\end{smallmatrix}$$ 3 ⨯ 6 ± ⨯ 9 ± | 162. |

Ex. 2 $1.478 \times 2.589 \times 3.69 = 14.11993998$

ⓐ $\begin{smallmatrix}4\\2\\0\end{smallmatrix}$ 1 · 478 ⨯ 2 · 589 ± ⨯ 3 · 69 ± | 11. |

ⓑ $\begin{smallmatrix}4\\2\\0\end{smallmatrix}$ } Operation as for ⓐ | 14.09 |

ⓒ $\begin{smallmatrix}4\\2\\0\end{smallmatrix}$ | 14.1197 |

NOTE: With multiplications and successive multiplications, clearing is automatic and there is no need to depress the ⒞Ⓐ key

5. DIVISION

Ex. 1 $625 \div 25 = 25$

$$\begin{smallmatrix}4\\2\\0\end{smallmatrix}$$ 625 ÷ 25 ± | 25. |

Ex. 2 $9.87654312 \div 8 = 1.23456789$

ⓐ $\begin{smallmatrix}4\\2\\0\end{smallmatrix}$ 9 · 87654312 ÷ 8 ± | 1. |

ⓑ $\begin{smallmatrix}4\\2\\0\end{smallmatrix}$ } Operation as for ⓐ | 1.23 |

ⓒ $\begin{smallmatrix}4\\2\\0\end{smallmatrix}$ | 1.2345 |

6. SUCCESSIVE DIVISION

Ex. 1 $625 \div 5 \div 5 = 25$

$$\begin{smallmatrix}4\\2\\0\end{smallmatrix}$$ 625 ÷ 5 ± ÷ 5 ± | 25. |

Ex. 2   789÷3.14÷1.414=177.70430364

ⓐ $^4_2$❍ 789 ⊟ 3 ⊡14 ± ⊟ 1 ⊡414 ±

| | 177. |

ⓑ $^4_2$❍ ⎫
                    ⎬ Operation as for ⓐ

| | 177.70 |

ⓒ $^4_2$❍ ⎭
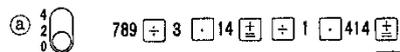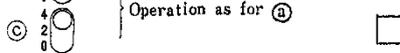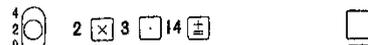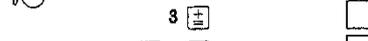
| | 177.7042 |

> NOTE: With divisions and successive divisions, clearing is auto-
> matic and there is no need to depress the [CA] key.

ADVANCED CALCULATIONS

1. MULTIPLICATION WITH A CONSTANT

Ex. 1   2×3.14=6.28
         3×3.14=9.42
         3.5×3.14=10.99

$^4_2$❍ 2 ⊠ 3 ⊡14 ±

| | 6.28 |

3 ±

| | 9.42 |

3 ⊡ 5 ±

| | 10.99 |

> NOTE: The second figure registered is the constant.

2. DIVISION BY A CONSTANT

Ex. 1   56÷2.8=20
         63÷2.8≒22.5
         14.7÷2.8=5.25

$^4_2$❍ 56 ⊟ 2 ⊡ 8 ±

| | 20.00 |

63 ±

| | 22.50 |

14 ⊡ 7 ±
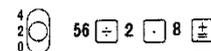
| | 5.25 |

> NOTE: The second figure registered is the constant.

3. MIXED CALCULATION

Ex. 1   3.6×2÷8=0.9

$^4_2$❍ 3 ⊡ 6 ⊠ 2 ± ⊟ 8 ±

| | 0.90 |

Ex. 2   (12+45)×7.8=444.6

$^4_2$❍ [CA]12 ±45 ± ⊠ 7 ⊡ 8 ±

| | 444.60 |

Ex. 3   (98−65)÷5=6.6

$^4_2$❍ [CA]98 ±65 ⊜ ⊟ 5 ±

| | 6.60 |

Ex. 4   (2.3×2)−3=1.6

$^4_2$❍ 2 ⊡ 3 ⊠ 2 ± ± 3 ⊜

| | 1.60 |

Ex. 5   (12÷3)+3=7

$^4_2$❍ 12 ⊟ 3 ± ± 3 ±
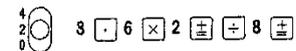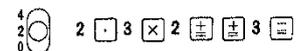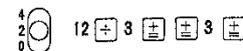
| | 7.00 |

4. MARKUP

Ex.	Determine the sales price which will reflect the desired profit on the original cost.
	Original cost $150.00
	Desired markup 25%
	Gross profit ?
	Sales price ?

$\begin{smallmatrix}4\\2\\0\end{smallmatrix}$◯ ·]25 [×]150 [±] | 37.50 | Markup

[±] [±] | 187.50 | Sales price

5. DISCOUNT

Ex.	Determine the discount and the net price.
	Invoice amount $125.00
	Discount 15%
	Amount of discount ?
	Net price ?

$\begin{smallmatrix}4\\2\\0\end{smallmatrix}$◯ ·]15 [×]125 [±] | 18.75 |

[±] [=] | 106.25 |

7. SPECIFICATIONS

Type	Mini Electronic Calculator
Model	ICC-807D
Numeric Keys	10 key system
Display	Numeric display tube
Decimal point	Floating input Fixed output (0, 2, 4)
Semiconductors	LSIs
Calculating speeds	Addition and subtraction max. 0.1 sec. Multiplication and division max. 0.3 sec.
Operating temperature range	$0^{\circ}C \sim 40^{\circ}C$ $(32^{\circ}F \sim 104^{\circ}F)$
Power consumption	AC adaptor 3.5 W Calculator 2.5 W
External dimensions	92(w) x 152(d) x 33(h) mm 3-11/16(w) x 6-1/16(d) x 1-5/16(h) inch
Weight	0.54 kg (1.19 lbs.) including CADNICA batteries
Power supply	AC adaptor (AC Local voltage ± 10% 50/60 Hz)

NOTE: We can accept no responsibility for damage resulting from unauthorized disassembly of the calculator. Please call your local Sanyo service center for repair.