SANYO

A GREAT NAME IN ELECTRONICS

SANYO MINI ELECTRONIC CALCULATOR
ICC-0081 INSTRUCTION MANUAL

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CONTENTS

In this mini-electronic calculator, Sanyo Electric has used still further improved ultra-precision, high performance LSIs, and by incorporating Cadnica rechargeable batteries which never need replacing, has produced a calculator of unequalled portability.
We believe that this new dimension of convenience will make it an invaluable aid both in the office and at home. Operation is extremely simple: we ask users simply to read through these instructions and perform the calculations as they go along. Once understood, operational methods will never be forgotten and we are confident that the ICC-0081 will give long years of valuable service.

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.

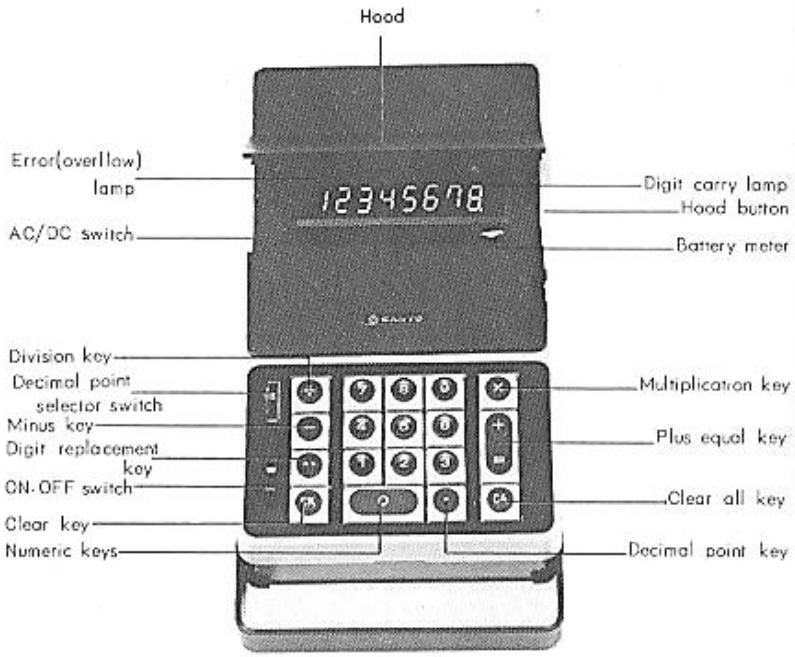
4 A Cadnica rechargeable battery is incorporated in this model. It can be used in places with no electric power. The battery never needs replacing and cordless operation for up to 5 or 6 hours is possible.

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 ➡

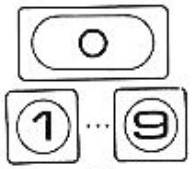
lamp lights indicating the use of the eight back-up digits.

* The built-in battery meter lets you see at a glance the condition of the battery.
* The calculator is fitted with a protective hood. When it is closed, the display indicator is protected and an interlocking switch shuts off the calculator.

2. KEYBOARD



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.

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 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 enter the multiplier and depress the (=) key. The product will be displayed.

Division key

When dividing, depress this key after registering the dividend. Then enter the divisor and depress the (=) key. The quotient will be displayed.

Decimal point key

When entering 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 the keyboard.

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 togather.

E
Error lamp

If overflow occurs, this lamp lights.

4. FUNCTION OF SWITCHES, METER, ETC.

Hood button

Opening and closing the hood
* When the hood button is depressed, the hood opens.
* To close the hood, push it down gently.

ON–OFF switch (keyboard switch)

Turning on the power
* Open the hood and turn the power switch ON.
Turning off the power
* Turn the power switch OFF and close the hood.

Decimal point selector switch

The position of the decimal point in the result is preselected. Set the selector switch to 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 six positions: 0, 2, 3, 4, 6 and 8.

Battery meter

The battery meter shows the condition of the Cadnica rechargeable battery. For further details, refer to the section on Battery Charging.

AC/DC switch

* Cordless operation (with dry cells or rechargeable Cadnica battery):
  Set switch at "DC" position.
* Operation from AC power supply (wall outlet):
  Set switch at "AC" position.

5. POWER SOURCE

The Sanyo Mini Calculator can operate on either AC current through the use of the self contained power cord or on DC current through the use of the built in rechargeable Cadnica battery or four regular "C" cell batteries.

1. To operate on AC current
   * Set AC/DC switch to AC position.
   * Remove the AC cord from the compartment on the bottom of the calculator and plug into wall outlet.
   * When operating on battery pack, cord can be stored in the compartment again.

2. To operate on rechargeable battery pack
   * Set AC/DC switch to "DC" position before operation.

3. To recharge Cadnica batteries
   When the pointer in the battery meter comes to the red zone, remove AC plug from its compartment and plug into wall outlet. Set AC/DC switch to "AC" position and the batteries will recharge while operating the machine on AC current, and will even recharge when the calculator is not in use.
   * * Rechargeable Cadnica batteries can be recharged over a thousand times, which provides you with great convenience and economy. You can not overcharge the batteries, even with constant AC use.
   * Full recharging of the batteries takes 10–15 hours.

4. To operate on regular "C" cell batteries
   You can obtain from Sanyo an additional battery container which can be used with regular "C" cell batteries.
   When the pointer in the battery meter indicates that the Cadnica Rechargeable Batteries are low, and no AC outlet is available, you can continue to use your calculator by removing the Cadnica battery pack and replacing it with 4 "C" cell batteries installed in the battery container.

In order to replace the battery pack with the "C" cell container
   * Turn off the Key board switch.
   * Open hood by depressing hood button. Then pull the lid of the battery compartment downward to remove it.
   * Pull the band toward you to eject the battery pack and put the "C" cell container in its place.
   * Replace lid and you are ready to operate again.

NOTE:
1. When entered figures contain more than eight digits, the surplus digits will disappear from the display indicator. To check them, press the ◀▶ key and they will reappear on the indicator. Operation of the machine is also possible in this position.
2. When no decimal points are required in the result, set the decimal point selector switch to [0]. In all other cases, set it to the desired position.

6. CALCULATIONS

BASIC CALCULATION

1. ADDITIONS

Ex. 1 456 + 789 = 1245

[0] (CA) 456 (+) 789 (=) → 1245.

Ex. 2 1234567.8 + 1.234 = 1234569.034

[3] (CA) 1234567 (.) 8 (+) 1 (.) 234 (=) → 12 ➡

(◀▶) → 34569.034

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

[2] (CA) 5 (.) 62 (+) 3 (.) 28 (+) 11 (.) 25 (+) 2 (.) 8 (=) → 22.95

NOTE: If example 3 is calculated with the decimal point selector switch at [0] decimal points in the input figures can be entered, but the result will read 21 as all decimals are dropped.

2. SUBTRACTIONS

Ex. 1 456 − 123 = 333

[0] CA 456 ± 123 ⊖	333.

Ex. 2 5 − 7 = − 2

[0] CA 5 ± 7 ⊖	99999999 ➡
⊖	2.

NOTE: When the result is negative number as in example 2, the complement is displayed. If the ⊖ key is then depressed a second time, the result is displayed as a true number. Be sure to differentiate between positive and negative results.

Ex. 3 2 − 6 + 3 + 5 = 4

[0] CA 2 ⊖	2.
6 ⊖	99999999 ➡
3 ⊕	99999999 ➡
5 ⊕	4.

NOTE: When a negative number occurs during a calculation, the complement is displayed but the calculation should be continued as normally. If instead the ⊖ key is depressed a second time to obtain the true number, the ⊖ key must be depressed again to restore the complement before continuing the calculation.

3. MULTIPLICATIONS

Ex. 1 123 × 27 = 3321

[0] 123 ⊗ 27 ±	3321.

Ex. 2 1.2345 × 9.8765 = 12.19253925

ⓐ [0] 1 ⊙ 2345 ⊗ 9 ⊙ 8765 ±	12.
ⓑ [2]	12.19
ⓒ [3]	12.192
ⓓ [4] Operation as for ⓐ	12.1925
ⓔ [6]	12.192539
ⓕ [8]	12. ➡
◀▶	19253925

Ex. 3 456 × (− 99) = 45144

[0] 456 ⊗ 99 ±	45144.

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

4. SUCCESSIVE MULTIPLICATIONS

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

0	3 ⊗ 6 ± ⊗ 9 =	162.

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

ⓐ 0	1 • 478 ⊗ 2 • 589 = ⊗ 3 • 69 T	11.
ⓑ 2	Operation as for ⓐ	14.09
ⓒ 3		14.117
ⓓ 4		14.1197
ⓔ 6		14.119939
ⓕ 8		14. ➡
◀▶		11993998

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

5. DIVISIONS

Ex. 1 $625 \div 25 = 25$

0	625 ÷ 25 =	25.

Ex. 2 $9.87654312 \div 8 = 1.23456789$

ⓐ 0	9 • 87654312 ÷ 8 =	1.
ⓑ 2	Operation as for ⓐ	1.23
ⓒ 3		1.234
ⓓ 4		1.2345
ⓔ 6		1.234567
ⓕ 8		1. ➡
◀▶		23456789

6. SUCCESSIVE DIVISIONS

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

0	625 ÷ 5 ± ÷ 5 =	25.

Ex. 2 $789 \div 3.14 \div 1.414 = 177.70430364$

ⓐ 0	789 ÷ 3 • 14 = ÷ 1 • 414 =	177.
ⓑ 2	Operation as for ⓐ	177.70
ⓒ 3		177.703
ⓓ 4		177.7042
ⓔ 6		1 ➡
◀▶		77.704303
ⓕ 8		177. ➡
◀▶		70430364

NOTE: With divisions and successive divisions, clearing is automatic and there is no need to depress the (CA) key.

ADVANCED CALCULATIONS

1. MULTIPLICATION WITH A CONSTANT

Ex. 1
$2 \times 3.14 = 6.28$
$3 \times 3.14 = 9.42$
$3.5 \times 3.14 = 10.99$

[2] 2 ⊗ 3 ⊙ 14 ±	6.28
3 ±	9.42
3 ⊙ 5 ±	10.99

NOTE: The second figure entered is the constant.

2. DIVISION BY A CONSTANT

Ex. 1
$56 \div 2.8 = 20$
$63 \div 2.8 = 22.5$
$14.7 \div 2.8 = 5.25$

[2] 5 6 ÷ 2 ⊙ 8 ±	20.00
6 3 ±	22.50
1 4 ⊙ 7 ±	5.25

NOTE: The second figure entered is the constant

3. MIXED CALCULATIONS

Ex. 1 $3.6 \times 2 \div 8 = 0.9$

[2] 3 ⊙ 6 ⊗ 2 ± ÷ 8 ± → 0.90

Ex. 2 $(12 + 45) \times 7.8 = 444.6$

[2] (CA) 12 ± 45 ± ⊗ 7 ⊙ 8 ± → 444.60

Ex. 3 $(98 - 65) \div 5 = 6.6$

[2] (CA) 98 ± 65 ⊖ ÷ 5 ± → 6.60

Ex. 4 $(2.3 \times 2) - 3 = 1.6$

[2] 2 ⊙ 3 ⊗ 2 ± ± 3 ⊖ → 1.60

Ex. 5 $(12 \div 3) + 3 = 7$

[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 ?

2 ⊙ 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 ?

2 ⊙ 15 ⊗ 125 ⊜ → 18.75

⊕ ⊖ → 106.25

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

7. SPECIFICATIONS

Type	Mini Electronic Calculator
Model	ICC-0081
Numeric Keys	10 key system
Display	Full sized nixies.
Decimal point	Floating input Fixed output (0, 2, 3, 4, 6, 8,)
Semiconductors	LSIs
Calculating speeds	Additions and subtractions max. 0.1 sec. Multiplications and divisions max. 0.3 sec.
Operating temperature range	0°~ 40° (32°F ~ 104°F)
Power consumption	3.5W AC 120 Volts ± 10% 50/60 Hz
Battery	Cadnica rechargeable batteries pack or regular "C" size drycell (1.5V X 4)
External dimensions	141 (w) X 248 (d) X 71 (h) mm 5 ⅝ (w) X 9 ⅞ (d) X 2 ⅝ (h) inch
Weight	1.75kg (3.851 pound)