NS103
Data Checker
Operating
Instructions

Introduction

You have just purchased a unique product of the electronic age designed to help you keep track of your personal finances. Besides incorporating all of the standard calculator features which allow you to accurately figure interest charges, check bank and charge account statements, balance your household budget and so on, the NS103 offers a new way to keep or check your personal monetary records. The three continuous memories in your NS103 electronic record keeper can be used to save important balances for years (until the batteries die). Or, if you still prefer the conventional pencil and paper, use your NS103 as a convenient tool for double checking bills.

No matter how you use it, enjoy the convenience of safely storing results of important financial figurework in an instant.

Battery Information

The display speed decreases as the ambient temperature decreases. The calculator does not function properly below 0°C or 32°F.

The display will grow dim and finally blank when the batteries need replacing. Remove the screws from the lower panel and slide open the battery hatch. Remove old batteries and insert new ones in the indicated polarity. Use quality silver oxide batteries such as Mallory 10L14, Eveready 357 or Ray-O-Vac RW22. You can expect to get about 5 years of use from your calculator before batteries must be replaced if you use your calculator on the average of 45 minutes every day. When the batteries die, data in memory is lost.

Getting Started

Turn the switch located on the left side of the unit to the ▼ position. Press CE/C . The display shows 0. Turning on the calculator clears everything except the memories. The CE/C is labeled CE, an abbreviation for clear entry and C, abbreviation for clear. Here's how it works.

Press CE/C once directly following a mistaken number key depression and the displayed number is erased. Pending calculations and memories are not erased.

Press CE/C twice to clear everything in the calculator except the memories.

Press CE/C to clear the E symbol which lights in the display to signal an error condition. An error condition is caused by dividing a number by zero or calculating an answer too large for the eight-digit display to handle.

Floating Decimal

With the switch set at ▼ , the calculator operates with a floating decimal. A floating decimal system automatically puts the decimal behind numbers as you key them into the calculator until you press the decimal point key ·

When the · is pressed the decimal point is fixed at that place and further numbers keyed into the calculator during that entry are entered as decimal fractions, to the right of the decimal point.

Add Mode

Set the switch at AM for add mode. The add mode system puts the decimal in the dollars and cents position (0.00) automatically. This eliminates the need for you to remember to press the decimal point key when keying in numbers.

Add, Subtract, Multiply, Divide

To perform simple addition, subtraction, multiplication or division, key in the problem, as it is written.

Enter the first number; press [+] , [−] , [×] or [÷] . Enter the second number; press [=]

Percent Key

The [%] key is used in different ways as illustrated below:

Depress: 115 [×] 5 [%] to find 5% of 115.
Answer: 5.75
Depress: 15 [÷] 75 [%] to find what percentage 15 is of 75.
Answer: 20%
Depress: 115 [×] 5 [%] [+] to find the net amount which results from adding on 5% to 115.
Answer: 120.75
Depress: 115 [×] 5 [%] [−] to find the net amount which results from discounting 115 by 5%.
Answer: 109.25

Calculations With a Constant

The feature is useful when you have repetitive calculations such as:

5 x 2 = 10
5 x 3 = 15
5 x 4 = 20
5 x 5 = 25

Calculations with a constant multiplicand are performed by keying in the constant only once, pressing [x] and entering variable numbers on [=] as follows:

Key sequence: 5 [x] 2 [=] (problem performed in standard manner)
3 [=] 4 [=] 5 [=] (variable numbers 3, 4 and 5 are entered on the equals key)
Display shows: 10, 15, 20 and 25

The calculator remembers the number entered on the [x] key, 5, so that you only need to key it into the calculator once. After that, just key in the other numbers and press [=]

Calculations with a constant divisor are performed like this:

Key sequence: 20 [÷] 4 [=]
16 [=] 12 [=] 2 [=]
Display shows: 5, 4, 3, 0.5

The calculator remembers the second number keyed into a division problem, 4 in the above example.

The second factor in addition and subtraction is retained as a constant addend or subtrahend.

E In Display

The E which lights in the display indicates that an error or invalid key sequence has been performed. The calculator keys will not work until CE/C is pressed to clear the error condition. The operations which cause error are division by zero and calculating results greater than ±99999999. When results are greater than ±99999999, the eight most significant digits of the result are displayed with the decimal point placed eight places to the left of its true position.

Three Permanent Memories: A, B, C

The memories of your calculator retain data even while the calculator is turned off making it possible, if you like, to keep records a new, electronic way . . . without pen/paper. Or, use the record-keeping facilities of your calculator as a verification of information also recorded on paper. Data is retained in the memory until the batteries need replacing.

Get Started

Make sure that all the memories are clear.

Recall balance A by pressing BAL A . Reenter the balance using the numeral keys. Press CHK A . Display shows zero(s).

Recall balance B by pressing BAL B . Reenter the balance using the numeral keys. Press PMT B . Display shows zero(s).

Recall balance C by pressing BAL C . Reenter the balance using the numeral keys. Press PMT C . Display shows zero(s).

Checking Account Memory A

After clearing the memories, key in the amount which you have in your checking account, press DEP A .

- When you make a deposit into your checking account, key in the amount of the deposit; press DEP A . The display shows your new balance.
- Key in the amount of each check you write; press CHK A . The display shows your new balance in memory A.

Charge Account Memories B and C

The charge account memories, B and C, are designed to keep a record or verification check of your charge accounts, loan balances, or other accounts payable type records you have. These memories may also be used for keeping budget records.

- After clearing memories B and C, key in the current balance, principal of the loan amount, etc., press CHG followed by B or C .
- Key in payments as you make them, press PMT , B or C . The display shows the balance.

- If the record you are keeping is of the interest bearing type, you must add the interest each period from your statement to your remaining balance. To do this, key in the interest charge and press CHG , B or C .

"M" lights in the display when a memory designator key A B or C is pressed. "M" also lights when GT is pressed to show the grand total of balances in memories A , B and C .

A negative sign, —, lights above M in the display, $\overline{M}$, to indicate that a balance in a memory is a credit balance. For example, if you are overdrawn in your checking account, $\overline{M}$ would light to the left of your balance after pressing BAL , A .

Results of calculations which are negative will be shown with the negative sign, e.g. the key sequence 6 — 10 = produces a negative result displayed, — 4 .

GT Key

Press this key to see the sum total or grand total of memories A, B and C. If you are keeping your checking account records in memory A and two charge account records in memories B and C, pressing GT shows you your net worth, that is, amount of money in checking account less amounts owed on the two charge accounts.

Example

Record the income in memory A and the expenditures in memories B and C.

Income	Utilities/Rent	Travel/Entertainment
$715.26	$ 22.65	$11.70
$ 17.52	$ 19.70	$ 5.55
$ 35.76	$350.00	$ 7.00
		$75.00

Clear memories according to previous instructions before performing example problem.

Key Sequence	Display	Comments
715.26		
DEP A	715.26	
17.52		
DEP A	732.78	Income
35.76		
DEP A	768.54	
22.65		
CHG B	22.65	
19.70		
CHG B	42.35	Utilities And Rent
350.00		
CHG B	392.35	

11.70			
CHG	C	11.7	
5.55			
CHG	C	17.25	Entertainment
7.00			Expenses
CHG	C	24.25	
75.00			
CHG	C	99.25	
GT		276.94	Net Worth = Income − Expenses

Example

Key Sequence	Display	Comments
		Clear memories according to previous instructions before performing example problem.
1125 DEP A	M 1125.	Enters $1125 into memory A; represents balance in checking account.
59.22 CHG B	M 59.22	Enters $59.22 into memory B; represents balance owed on charge account.
476.23 CHG C	M 476.23	Enter $476.23 into Memory C; represents balance owed on charge account.
5.50 CHK A 2.50 CHK A	M 1119.5 M 1117.	Records two checks written, display shows balance in checking account after check entering sequence complete.
25 CHG B	M 84.22	Records a charge to memory B.

7.50 PMT B	$\overline{M}$	76.72	Decreases credit balance by $7.50.
50 PMT C	$\overline{M}$	426.23	Decreases credit balance by $50.00
GT	M	614.05	Net worth = Mem A – Mem B – Mem C

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