

OPERATING
INSTRUCTIONS

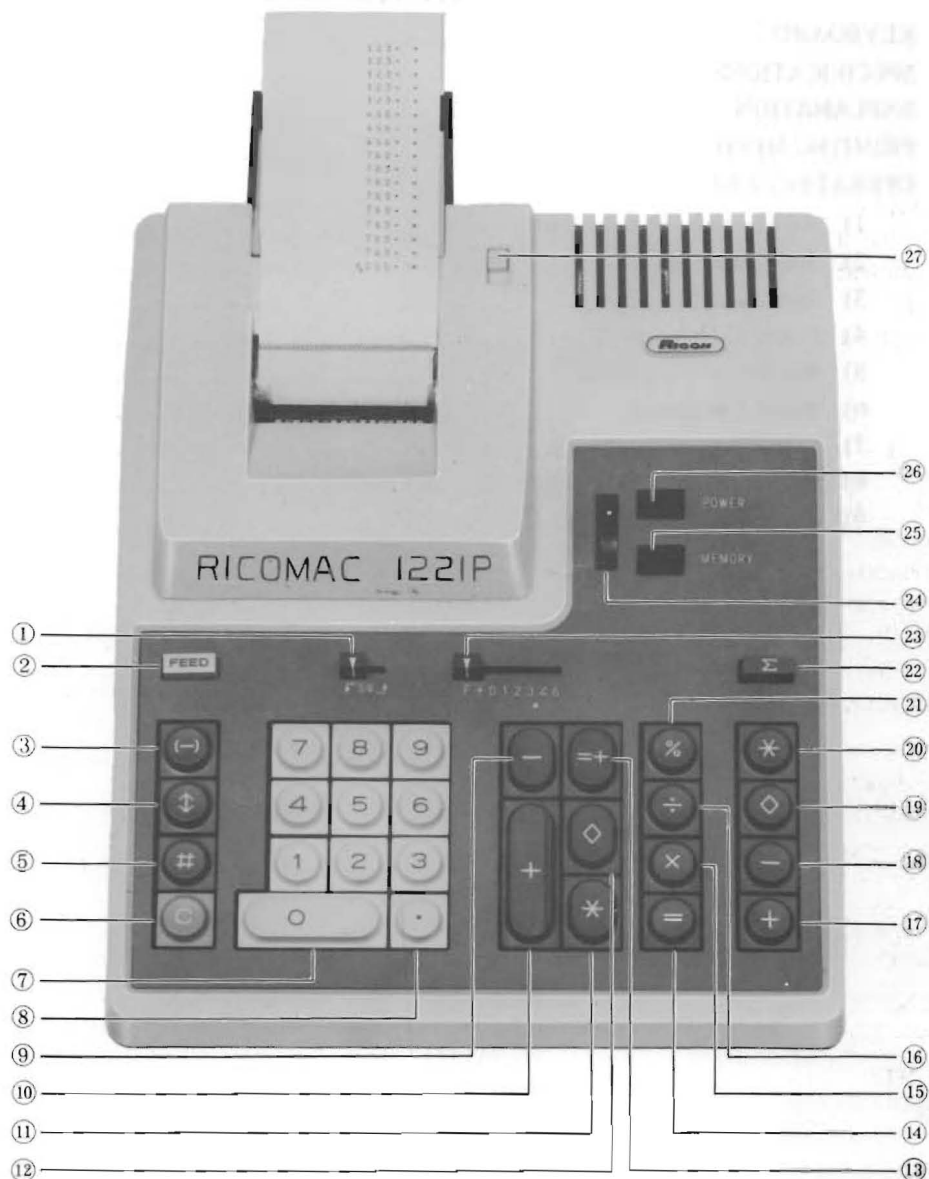
ELECTRONIC CALCULATOR

RICOMAC 1221P

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KEYBOARD



- | | | |
|-----------------------------|-------------------------------|----------------------------|
| 1. Round-off selector | 10. Memory I Addition key | 19. Memory II Subtotal key |
| 2. Paper feed key | 11. Memory I Total key | 20. Memory II Total key |
| 3. Negative entry key | 12. Memory I Subtotal key | 21. Percentage key |
| 4. Exchange key | 13. Accumulation equal key | 22. Accumulation switch |
| 5. Non-add key | 14. Equal key | 23. Decimal point selector |
| 6. Clear key | 15. Multiplication key | 24. Power switch |
| 7. Numeral keys | 16. Division key | 25. Memory lamp |
| 8. Decimal point key | 17. Memory II Addition key | 26. Power lamp |
| 9. Memory I Subtraction key | 18. Memory II Subtraction key | 27. Paper reset knob |

SPECIFICATIONS

1. CAPACITY:

Entry	12 digits
Addition and Subtraction	12 digits
Multiplication:	
Multiplier	12 digits
Multiplicand	12 digits
Product	12 digits
Division:	
Divisor	12 digits
Dividend	12 digits
Quotient	12 digits
Memory	12 digits
Maximum Decimals	11 digits

2. PRINTING:

Number of print characters:

16 (12 numerals, 1 decimal point, 1 negative sign, and 2 symbols)

Speed: 2.7 lines per second

Paper: Standard roll paper

Width 57 mm

Diameter 70 mm max.

Ribbon: 2-color (Black and Red)

Width 13 mm

Length 6 m

3. COMPONENTS:

LSI

4. VOLTAGE:

AC 115V, 50/60 Hz

5. POWER CONSUMPTION:

20 W

6. SERVICE TEMPERATURE:

0 ~ 40°C

7. DIMENSIONS:

9-7/16" (W) × 11-13/16" (D) × 3-25/32" (H)

8. WEIGHT:

4.1 kg

EXPLANATION

(See keyboard picture on Page 2)

1. \downarrow 5/4 \uparrow ROUND-OFF SELECTOR

- a. \downarrow truncate or drop-off position
- b. 5/4 rounds 5 or more
- c. \uparrow rounds 1 or more

2. **FEED** PAPER FEED KEY

This key advances the paper.

3. **-** NEGATIVE ENTRY KEY

When negative numbers are to be entered, this key must be depressed to give negative sign to entry.

4. **1/x** EXCHANGE KEY

Permits reciprocal calculation and helps to check previous entry or result.

5. **DATE** NON-ADD KEY

Prints numbers such as dates, slip numbers etc.

6. **C** CLEAR KEY

When **C** key is depressed after entry, only indexed figure is cleared. $x \div y \text{ C}$

When **C** key is depressed twice after entry, all data except in memory is cleared. $x \div y \text{ C C}$

When **C** key is depressed after function, all data except in memory is cleared. $x \div \text{C}$

Note:

To print out the memory contents, use **MC** key after adding, subtracting or accumulating: this clears the memory.

7. **0** **9** NUMERAL KEYS

8. **.** DECIMAL POINT KEY

9. **-** I MEMORY I SUBTRACTION KEY

10. **+** I MEMORY I ADDITION KEY

11. ***** I MEMORY I TOTAL KEY

Pressing this key, when **Σ** switch is in depressed state, causes the data stored in MEMORY I to additively enter MEMORY II.

12. **◇** I MEMORY I SUBTOTAL KEY

13. **÷** ACCUMULATION EQUAL KEY

The results of multiplication and division are accumulated in the MEMORY I.

14. **=** EQUAL KEY

Obtain the result of multiplication and division.

This key will add products and quotients to MEMORY II when **Σ** switch is engaged.

15. **×** MULTIPLICATION KEY

16. **÷** DIVISION KEY

17. **+** II MEMORY II ADDITION KEY

18. **-** II MEMORY II SUBTRACTION KEY

19. **◇** II MEMORY II SUBTOTAL KEY

20. ***** II MEMORY II TOTAL KEY

21. ☒ PERCENTAGE KEY

In multiplication, a depression of this key will automatically print the tax or discount rate, the dollar and cent amount of the tax or discount and the net.

22. ☒ ACCUMULATION SWITCH

When ☒ switch is engaged, accumulation into MEMORY II of products and quotients results from a depression of the ☐ key

23. F + 012346 DECIMAL POINT SELECTOR

With the selector set at "F", you have a floating decimal point. Setting the selector at one of the positions "0" to "6" fixes the decimal point and all the subsequent number entries and operations will be effected by referring to that position of the decimal point.

"+" is for selecting ADD mode: with this key depressed, the result of addition and subtraction as well as multiplication and division shows up with its decimal point appearing at 2.

24. ☐ POWER SWITCH

25. ☐ MEMORY MEMORY LAMP

If this lamp is on, it means that MEMORY II has data in store.

26. ☐ POWER POWER LAMP

27. PAPER RESET KNOB

To draw paper out as when paper jamming has occurred, use this knob. (See on page 9)

Note:

After unpacking the machine, make sure the ribbon is not too loose before turning on the power switch.

RICOMAC 1221P has the following special function

1. When the result of an operation exceeds 12 digits, the decimal point (if it is in the result) automatically shifts toward the right, bringing the entire print with it toward the right. Thus, such an excess does not result in ERROR.

EXAMPLE:

Problem	Instruct	Keying	Printing
12345679 × 18	DEC 6	12345679 <input checked="" type="checkbox"/> 18 <input type="checkbox"/>	12,345,679. × 18. = 222,222,222.000

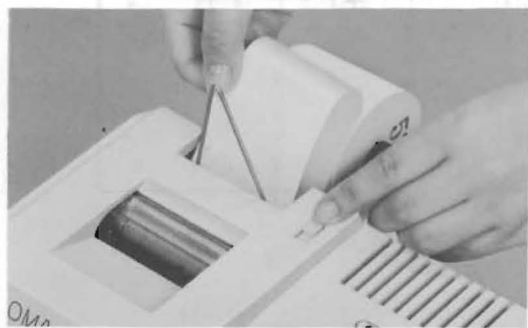
2. Automatic data clearing occurs when POWER SWITCH is turned on or when an error occurs during calculating operation. This feature makes it unnecessary to press ☒ key for such data clearing.

When clearing occurs:	Printing
a) Turning on POWER SWITCH	C
b) Misentry of number 1234567890123 123456789012 \otimes 2 \equiv	E 123,456,789,012. x 2. = 246,913,578,024.
c) Error in result 4500 \otimes 1234567900 \equiv 123456790 \equiv	4,500. x 1,234,567,900. = 5.5555555000. E 12 4,500. x 123,456,790. = 555,555,555,000.
d) Error in memory addition 999999999999 \oplus II 5 \oplus II \odot II	999,999,999,999. M+ E 999,999,999,999. M \odot

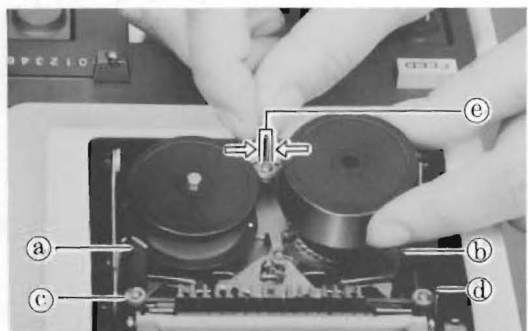
- It is by this function that printing action halts automatically when the print has been made fully, with a function key having been pressed.
- In multiplication, the first number entered automatically goes into the store as a memorized constant. (See on page 9)
- In division, the second number entered automatically goes into the store as a memorized constant. (See on page 10)
- Depressing **FEED** key sets the paper in automatic feed action. During printing, the paper automatically advances for line spacing (single) after each printed line.
If $\#$, \equiv , \div , $\%$, \otimes I or \otimes II key has been pressed, each line printing results in a double-line-spacing advance of the paper.
- It is by this function that pressing two or more keys at the same time has no effect in the machine.

PRINTING MECHANISM

How to set roll paper:



Spool removal for ribbon replacement:



1. After mounting the paper holder on the machine, open the roll paper fitting position of the paper holder sidewise and then set the roll paper.
2. After mounting the roll on the shaft, insert the folded end squarely into the inlet, and depress **FEED** key to feed in until it extends beyond the paper cutter.
3. Do not try to force out paper by pulling forcibly when it is jammed and refuses to get fed. To clear the jam, pull the paper reset knob toward front and gently draw the paper out.
1. Turn off the power switch. Take off the top cover of the printer.
2. Move the ribbon spool retaining lever ⑤, right or left, in the direction of the arrowhead, and take the loaded spool out.
3. Place new ribbon in slots ③ and ④ and around ② and ① and then insert two ribbon spools.
4. In this case, insert both spools to both shafts after pulling ⑤.
5. Set both spools to the correct position by pushing down each spool and moving right and left.
6. Make sure the new ribbon spools are set correctly.

OPERATING EXAMPLES

1) Addition and Subtraction

Problem	Instruct	Entry on keyboard	Touch	Printing
321 + 789	DEC F	3 2 1	+ I	321. +
		7 8 9	+ I	789. +
			* I	1,110. *
Repeat Addition & Subtraction 123 + 123 - 123 + 123	DEC F	1 2 3	+ I	123. +
			+ I	123. +
			- I	123. -
			+ I	123. +
			* I	246. *
1.23 + 4.56 - 7.89	DEC +	1 2 3	+ I	1.23 +
		4 5 6	+ I	4.56 +
		7 8 9	- I	7.89 -
			* I	2.10 - *

2) Multiplication

Problem	Instruct	Entry on keyboard	Touch	Printing
1.25 × 9.876	DEC 2 5/4	1 . 2 5 9 . 8 7 6	⊗ =	1.25 x 9.876 ≈ 12.35
Chain Multiplication Ketten-Multiplikation 9.53 × (-1.9) × 3	DEC 2 ↑	9 . 5 3 - 1 . 9 3	⊗ ⊗ =	9.53 x 1.9 - x 3. ≈ 54.33.-
Constant Multiplication 36 × 1.2 36 × 6.5 36 × -9.6	DEC F ↓	3 6 1 . 2 6 . 5 - 9 . 6 1 9 . 6	⊗ = = = =	36. x 1.2 = 43.2 36. x 6.5 = 234. 36. x 9.6 - = 345.6 -

3) Division

Problem	Instruct	Entry on keyboard	Touch	Printing
36.9 ÷ 8	DEC F ↓	3 8 . 9 8	÷ =	36.9 ÷ 8. 4.6125 =
Chain Division 123 ÷ (-2.5) ÷ 9	DEC 3 5/4	1 2 3 - 2 . 5 9	÷ ÷ =	123. ÷ 2.5 - ÷ 9. ≈ 5.467 -
Constant Division 12.3 ÷ 16 45.6 ÷ 16 -78.9 ÷ 16	DEC 3 ↑	1 2 . 3 1 6 4 5 . 6 - 7 8 . 9	÷ = = =	12.3 ÷ 16. ≈ 0.769 45.6 ÷ 16. ≈ 2.850 78.9 - ÷ 16. ≈ 4.932 -

4) Power Calculation

Problem	Instruct	Entry on keyboard	Touch	Printing
17^4	DEC F ↓	1 7	⊗	17. x
			=	17. =
				289.
			=	17. x
				289. =
				4,913.
			=	17. x
				4,913. =
				83,521.

5) Reciprocal Calculation

Problem	Instruct	Entry on keyboard	Touch	Printing
$\frac{1}{(23+4) \times 5}$	DEC 4 ↓	2 3 4	+ I	23.0000 +
			+ I	4.0000 +
			* I	27.0000 *
			⊗	27.0000 x
			÷	5. ÷
			! (1/x)	1. ↓
			=	135. =
				0.0074

6) Mixed Calculation

Problem	Instruct	Entry on keyboard	Touch	Printing
$\frac{147 \times 25.8 + 65.4 - 789}{3.2}$	DEC 4 ↓	$\begin{array}{c} 147 \\ 25.8 \end{array}$	$\begin{array}{c} \times \\ =+ \end{array}$	$\begin{array}{r} 147. \quad \times \\ 25.8 \quad = \\ 3,792.6000 \quad + \end{array}$
		$\begin{array}{c} 65.4 \\ 789 \end{array}$	$\begin{array}{c} + I \\ - I \\ * I \end{array}$	$\begin{array}{r} 65.4000 \quad + \\ 789.0000 \quad - \\ 3,069.0000 \quad * \end{array}$
		$\begin{array}{c} 3.2 \end{array}$	$\begin{array}{c} \div \\ = \end{array}$	$\begin{array}{r} 3,069.0000 \quad \div \\ 3.2 \quad = \\ 959.0625 \end{array}$

7) Calculation of Percentage

Problem	Instruct	Entry on keyboard	Touch	Printing
\$5800 plus 5% Tax Cost \$5800 Tax \$ 290 Total \$6090	DEC 2 ↓	$\begin{array}{c} 5800 \\ 5 \end{array}$	$\begin{array}{c} \times \\ \% \end{array}$	$\begin{array}{r} 5,800. \quad \times \\ 5. \quad \% \\ 290.00 \\ 6,090.00 \quad * \end{array}$
\$5800 less 15% Discount Cost \$5800 Discount \$ 870 Net \$4930	DEC 2 ↓	$\begin{array}{c} 5800 \\ - 15 \end{array}$	$\begin{array}{c} \times \\ \% \end{array}$	$\begin{array}{r} 5,800. \quad \times \\ 15. \quad - \% \\ 870.00 \quad - \\ 4,930.00 \quad * \end{array}$
$\frac{42}{168} = 25\%$	DEC 2 ↓	$\begin{array}{c} 42 \\ 168 \end{array}$	$\begin{array}{c} \div \\ \% \end{array}$	$\begin{array}{r} 42. \quad \div \\ 168. \quad \% \\ 25.00 \end{array}$

8) Two Memory Accumulation

Problem	Instruct	Entry on keyboard	Touch	Printing
820 x 40 = 32800	DEC F	8 2 0	X	820. x
820 x 65 = 53300	↓	4 0	+ II	40. M +
820 x 30 = 24600			=+	40. =
135 110700				32,800. +
		6 5	+ II	65. M +
			=+	820. x
				65. =
				53,300. +
		3 0	+ II	30. M +
			=+	820. x
				30. =
				24,600. +
			* II	135. M *
			* I	110,700. *

9) Grand Total

Problem	Instruct	Entry on keyboard	Touch	Printing
#1 123 + 45.63	DEC + ↓	1 1 2 3 . 4 5 6 3	Σ ↓ # + I + I * I	1. # 123.00 + 45.63 + 168.63 * 168.63 M +
#2 789 - 59.98 + 891.33		2 7 8 9 . 5 9 9 8 8 9 1 3 3	# + I - I + I * I	2. # 789.00 + 59.98 - 891.33 + 1,620.35 * 1,620.35 M +
#3 235.11 + 553.33		3 2 3 5 1 1 5 5 3 3 3	# + I + I * I	3. # 235.11 + 553.33 + 788.44 * 788.44 M +
#1 + #2 + #3			* II Σ ↑	2,577.42 M *

MEMO

Please note the following changes in your instruction book.

PAGE 4 Reciprocal

Depressing the $\frac{1}{x}$ key twice followed by the $=$ key will cause the reciprocal $\frac{1}{x}$ to be displayed. To find the reciprocal of a result press $= \frac{1}{x} =$. The answer is 0.6666666.

PROBLEM

Find the reciprocal of 8

$$\text{Find } \frac{1}{2 \times 3 \div 4}$$

ENTRY

$$8 \div =$$

$$2 \times 3 \div 4 =$$

$$\div =$$

DISPLAY

0.125
1.5
0.6666666

PAGE 17 Memory

PROBLEM

$$(2 \times 6) + (12 \div 3) - 13 = 3$$

The answer is 3.

ENTRY

$$2 \times 6 = M +$$

$$12 \div 3 = M +$$

$$M -$$

$$M =$$

DISPLAY

12.
4.
13.
3.

PAGE 27 Problem 12

PROBLEM

$$\frac{(3 + 13)5 - 20}{3.68}$$

The denominator is 3.68

ENTRY

$$3 + 13 \times$$

$$5 =$$

$$20 \div$$

$$3 \div 68 =$$

DISPLAY

16.
80.
60.
16.304347

MEMO

MEMO

