



IMPORTANT

The wires in this mains lead are coloured in accordance with the following code:

BLUE:	Neutral
BROWN:	Live

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug proceed as follows:
The wire which is coloured **BLUE** must be connected to the terminal which is marked with the letter **N** or coloured black.
The wire which is coloured **BROWN** must be connected to the terminal which is marked with the letter **L** or coloured red.
This apparatus must be protected by a **3A** fuse in the mains plug or distribution board.
CAUTION: DO NOT CONNECT THE LIVE (BROWN) WIRE OR THE NEUTRAL (BLUE) WIRE TO THE EARTH TERMINAL AT YOUR 3 PIN MAINS PLUG.

SHARP CORPORATION

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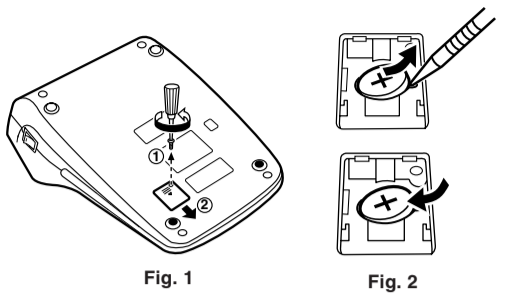
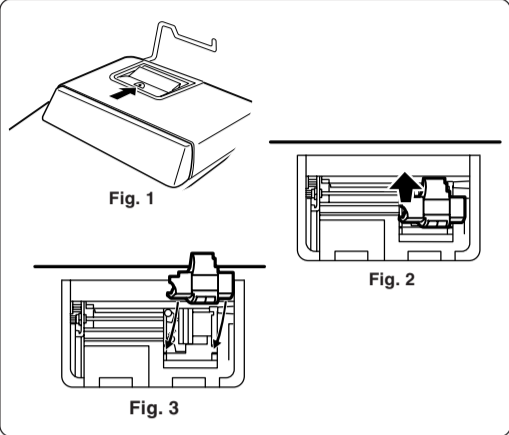
INK ROLLER REPLACEMENT

If printing is blurry even when the ink roller is in the proper position, replace the roller.

Ink roller: Type EA-772R

WARNING
APPLYING INK TO WORN INK ROLLER OR USE OF UNAPPROVED INK ROLLER MAY CAUSE SERIOUS DAMAGE TO PRINTER.

- Press the power off key.
- Remove the printer cover. (Fig. 1)
- Hold the top of the ink roller and remove the roller by pulling it toward you and then upward. (Fig. 2)
- Install the new ink roller in the correct position. Make sure that the roller is securely in place. (Fig. 3)
- Put back the printer cover.



After battery replacement

- Connect the power supply plug to an outlet and press the power on switch.
Check that "0." is displayed. If "0." is not displayed, remove the battery, reinstall it, and check the display again.
- Reset the tax / discount rate and conversion rate.
- In the box on the right, fill in the month/year that you changed the battery, as a reminder of when to change it again.

Month	Year

- Precautions on battery use**
- Do not leave an exhausted battery in the equipment.
 - Do not expose the battery to water or flame, and do not take it apart.
 - Store batteries out of the reach of small children.

Notes for handling Lithium batteries:

CAUTION
Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer.
Dispose of used batteries according to the manufacturer's instructions.

OPERATIONAL NOTES

- To insure trouble-free operation of your SHARP calculator, we recommend the following:
- The calculator should be kept in areas free from extreme temperature changes, moisture, and dust.
 - A soft, dry cloth should be used to clean the calculator. Do not use solvents or a wet cloth.
 - Since this product is not waterproof, do not use it or store it where fluids, for example water, can splash onto it. Raindrops, water spray, juice, coffee, steam, perspiration, etc. will also cause malfunction.
 - If service should be required, use only a SHARP servicing dealer, a SHARP approved service facility or SHARP repair service.
 - Do not wind the AC cord around the body or otherwise forcibly bend or twist it.
 - Unplug the calculator by pulling on the plug portion, not the cord.
 - Do not place objects on the AC cord. Do not run the AC cord under rugs, mats, or other such objects.
 - This product, including accessories, may change due to upgrading without prior notice.

SHARP will not be liable nor responsible for any incidental or consequential economic or property damage caused by misuse and/or malfunctions of this product and its peripherals, unless such liability is acknowledged by law.

Division:
The calculator will automatically remember the second number entered (the divisor) and \div instruction.
•: Neutral
A: Use of the Add mode permits addition and subtraction of numbers without an entry of the decimal point. When the Add mode is activated, the decimal point is automatically positioned according to the decimal selector setting.
Use of \cdot , \times and \div will automatically override the Add mode and decimally correct answers will be printed at the preset decimal position.

ROUNDING SELECTOR:
 $\uparrow 5/4 \downarrow$
†: An answer is rounded up.
5/4: An answer is rounded off.
‡: An answer is rounded down.
Note: The decimal point floats during successive calculation by the use of \times or \div .
If the decimal selector is set to "F" then the answer is always rounded down (\downarrow).

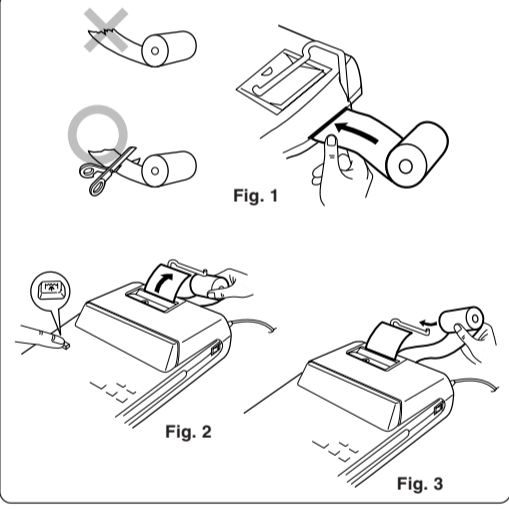
GRAND TOTAL MODE SELECTOR:
GT •
GT: Grand Total
•: Neutral

STORE KEY:
This key is used to store the conversion rate or the tax/discount rate.
Conversion rate:
• Enter the conversion rate, then press $\text{STR} \text{CR} \text{+}$.
• A maximum of 6 digits can be stored (decimal point is not counted as a digit).
Tax/discount rate:
• Enter the adding tax rate, then press $\text{STR} \text{TAX} \text{+}$.
• To store a discount rate, press $\text{STR} \text{ } \text{--}$ before pressing $\text{STR} \text{TAX} \text{+}$.
• A maximum of 4 digits can be stored (decimal point is not counted as a digit).

Note:
• For the conversion rate and the tax/discount rate, a single value can be stored for each. If you enter a new rate, the previous rate will be cleared.
• The stored values for the conversion rate and the tax/discount rate will be cleared if the power cable is disconnected.

PAPER ROLL REPLACEMENT

- Never insert paper roll if torn. Doing so will cause paper to jam.**
Always cut leading edge with scissors first.
- Insert the leading edge of the paper roll into the opening. (Fig. 1)
 - Turn the power on and feed the paper by pressing F . (Fig. 2)
 - Lift the attached metal paper holder up and insert the paper roll to the paper holder. (Fig. 3)



DO NOT PULL PAPER BACKWARDS AS THIS MAY CAUSE DAMAGE TO PRINTING MECHANISM.

ERRORS

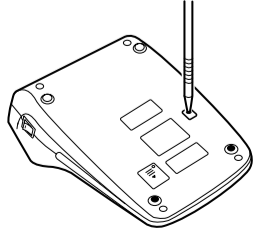
There are several situations which will cause an overflow or an error condition. When this occurs, "E" will be displayed. The contents of the memory at the time of the error are retained.
If an "0-E" is displayed at the time of the error, \times must be used to clear the calculator. If an "E" with any numerals except zero is displayed, the error may be cleared with CE or C and the calculation can still be continued.

Also, in rare cases, printing may stop midway and the indication "E" appear on the display. This is not a malfunction but is caused when the calculator is exposed to strong electromagnetic noise or static electricity from an external source. Should this occur, press the \times key and then repeat the calculation from the beginning.

- Error conditions:**
- Entry of more than 12 digits or 11 decimals. This error can be cleared with CE or C .
 - When the integer portion of an answer exceeds 12 digits.
 - When the integer portion of the contents of the memory exceeds 12 digits.
(Ex. M+ 999999999999 M+ 1 M+)
 - When any number is divided by zero.
(Ex. $5 \div 0 = \text{E}$)

REPLACEMENT OF BATTERY FOR MEMORY PROTECTION

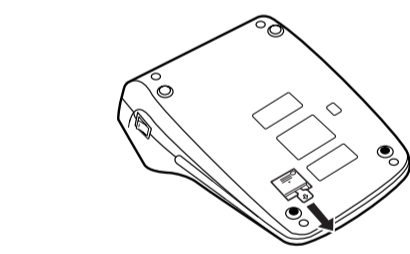
- Time for battery replacement**
Replace with a new battery once a year.
- Method of battery replacement**
Use one lithium battery (CR2032).
Notes:
- When the battery is depleted, the set tax/discount rate, conversion rate and the memory contents will be lost. You may want to write down the tax/discount rate and conversion rate, other important numbers on a sheet of paper.
 - When replacing the battery, the set tax/discount rate and conversion rate, the memory contents will be lost.
 - The life of the pre-installed battery may be shorter than expected because of the time the calculator spends during shipment.



USING THE CALCULATOR FOR THE FIRST TIME

First, pull out the insulation sheet for the memory protection battery (installed for retaining the tax/discount rate and conversion rate information).

Removing the insulation sheet, and resetting



- Pull out the insulation sheet for the memory protection battery.
- Connect the power supply plug to an outlet, then press the RESET switch on the back of the unit after pressing the power on switch. (See "RESETTING THE UNIT".)

OPERATING CONTROLS

- POWER ON SWITCH:**
When the "I" side of the power on switch is pressed, the calculator is turned on.
- POWER OFF KEY:**
When the power off key is pressed, the calculator is turned off.

PRINT / ITEM COUNT MODE SELECTOR:
•: Set to the non-print mode.
P: Set to the print mode.
P•IC: Set to the print and item count mode.
For addition or subtraction, each time \pm is pressed, 1 is added to the item counter, and each time -- is pressed, 1 is subtracted.
• The count is printed when the calculated result is obtained.
• Pressing of \times , \div , \pm or MU clears the counter.
Note: The counter has a maximum capacity of 3 digits (up to ± 999). If the count exceeds the maximum, the counter will recount from zero.

DECIMAL SELECTOR:
Presets the number of decimal places in the answer. In the "F" position, the answer is displayed in the floating decimal system.

CONSTANT/ADD MODE SELECTOR:
K•A: The following constant functions will be performed:
Multiplication:
The calculator will automatically remember the first number entered (the multiplicand) and \times instruction.

- PAPER FEED KEY**
- LAST DIGIT CORRECTION KEY**
- GRAND TOTAL KEY**
- CLEAR ENTRY KEY**
- TOTAL KEY**
- MULTIPLICATION KEY**
- DIVISION KEY**
- MINUS EQUAL KEY**
- PLUS EQUAL KEY**
- CHANGE SIGN KEY**
- MARKUP KEY**
- MEMORY TOTAL CLEAR KEY**
- MEMORY SUBTOTAL RECALL KEY**
- TAX-INCLUDING KEY**
- PRE-TAX KEY**
- PERCENT KEY**
- NON-ADD/SUBTOTAL KEY:**
Non-add – When this key is pressed right after an entry of a number in the Print mode, the entry is printed on the left-hand side with the symbol "#".
This key is used to print out numbers not subjects to calculation such as code, date, etc.
Subtotal – Used to get subtotal(s) of additions and/or subtractions. When pressed following the \pm or -- key, the subtotal is printed with the symbol "∅" and the calculation may be continued.
By pressing this key even in the Non-print mode, the displayed number is printed without any symbol.
- CONVERSION KEY:**
This key is used:
• to store the conversion rate.
• obtains a value by multiplying a given number with a specified conversion rate.
• to recall the presently stored rate for check. Press \times \times first to clear the calculation register and reset an error condition, then press $\text{CR} \text{+}$. The conversion rate is printed with the symbol "∆".
- CONVERSION KEY:**
This key is used to obtain a value by dividing a given number with a specified conversion rate.
- DISPLAY SYMBOLS:**
M : A number has been stored in memory.
-- : The display value is negative.
E : Error or overflow of capacity.
• : Appears when a number is in the grand total memory.

CALCULATION EXAMPLES

- Set the decimal selector as specified in each example. The rounding selector should be in the "5/4" position unless otherwise specified.
- The constant/add mode selector and grand total set mode selector should be in the "a" position (off) unless otherwise specified.
- The print/item count mode selector should be in the "PP-IC" position unless otherwise specified.
- If an error is made while entering a number, press **CE** or **→** and enter the correct number.

MIXED CALCULATION

$(240 + 180 + 180 - 75) \times 8 =$

Operation	Display	Print
240 $\frac{\pm}{\pm}$	240.	240•+
180 $\frac{\pm}{\pm}$	420.	180•+
$\frac{\pm}{\pm}$	600.	180•+
75 $\frac{-}{-}$	525.	75•-
\times		525• \diamond
	525.	525• \times
8 $\frac{\pm}{\pm}$		8•=
		4•200•*
	4,200.	

CONSTANT

$62.35 \times 11.11 =$
 $62.35 \times 22.22 =$

Operation	Display	Print
62.35 \times	62.35	62•35 \times
11.11 $\frac{\pm}{\pm}$		11•11 =
		692•71 *
	692.71	
		22•22 =
		1•385•42 *
	1,385.42	
		11•11 \div
		77•77 =
		0•143 *
	0.143	
		22•22 =
		0•286 *
	0.286	

PERCENT

$100 \times 25\% =$

Operation	Display	Print
100 \times	100.	100• \times
25 $\%$		25•%
		25•00 *
	25.00	
		123• \div
		1•368•%
		8•99 *
	8.99	

MARKUP AND MARGIN

- Markup and Profit Margin are both ways of calculating percent profit.
- Profit margin is percent profit vs. selling price.
 - Markup is percent profit vs. cost.
 - Cost is the cost.
 - Sell is the selling price.
 - GP is the gross profit.
 - Mkup is the percent profit based on cost.
 - Mrgn is the percent profit based on selling price.

To find	Knowing	Operation
Mrgn	Sell, Cost	Cost $\frac{-}{-}$ Sell $\frac{\pm}{\pm}$ MU
Mkup	Sell, Cost	Sell $\frac{\pm}{\pm}$ Cost $\frac{-}{-}$ MU
Sell	Cost, Mrgn	Cost $\frac{+}{+}$ Mrgn MU
Cost	Sell, Mrgn	Sell \times Mrgn $\frac{+}{+}$ MU
Sell	Cost, Mkup	Cost \times Mkup MU
Cost	Sell, Mkup	Sell $\frac{+}{+}$ Mkup $\frac{+}{+}$ MU

PERCENT CHANGE

- Calculate the dollar difference (a) and the percent change (b) between two yearly sales figures \$1,500 in one year and \$1,300 in the previous year.

Operation	Display	Print
1500 $\frac{\pm}{\pm}$	1,500.00	1•500•00 +
1300 $\frac{-}{-}$	200.00	1•300•00 -
MU		200•00 * (a)
		15•38 % (b)
	15.38	

ADDITION AND SUBTRACTION WITH ADD MODE

$12.45 + 16.24 + 19.35 - 5.21 =$

Operation	Display	Print
12.45 $\frac{\pm}{\pm}$	12.45	12•45 +
16.24 $\frac{\pm}{\pm}$	28.69	16•24 +
19.35 $\frac{\pm}{\pm}$	48.04	19•35 +
5.21 $\frac{-}{-}$	42.83	5•21 -
\times		42•83 *
	42.83	

*: $\frac{\pm}{\pm}$ was not used in the entries.

CORRECTION OF ERRORS

$123 + 556 \rightarrow 123 + 456$

Operation	Display	Print
123 $\frac{\pm}{\pm}$	123.	123•+
556 CE	0.	
456 $\frac{\pm}{\pm}$	579.	456•+
\times		579•*
	579.	

$123456Z \rightarrow 1234578$

Operation	Display	Print
1234567 \rightarrow	1,234,567.	
\rightarrow	123,456.	
\rightarrow	12,345.	
78	1,234,578.	

ADD-ON AND DISCOUNT

A 5% add-on to 100.

Operation	Display	Print
100 \times	100.	100• \times
5 MU		5•%
		5•00 Increase
		105•00 * New amount
	105.00	

A 10% discount on 100.

Operation	Display	Print
100 \times	100.	100• \times
10 $\frac{+}{+}$ MU		-10•%
		-10•00
		90•00 *
	90.00	

Ex.

Cost	\$200
Sell	\$250
GP	\$50
Mkup	25%
Mrgn	20%

Operation	Display	Print
200 $\frac{+}{+}$	200.	200• \div Cost
20 MU		20•%M Mrgn
		250•00 * Sell
		50•00 GP
	50.00	

ITEM COUNT CALCULATION

Bill No.	Number of bills	Amount
1	1	\$100.55
2	1	\$200.00
3	1	\$200.00
4	1	\$400.55
5	1	\$500.65
Total	(a)	(b)

Operation	Display	Print
100.55 $\frac{\pm}{\pm}$	100.55	100•55 +
200 $\frac{\pm}{\pm}$	300.55	200•00 +
$\frac{\pm}{\pm}$	500.55	200•00 +
400.55 $\frac{\pm}{\pm}$	901.10	400•55 +
500.65 $\frac{\pm}{\pm}$	1,401.75	500•65 +
\times		005 (a)
		1•401•75 * (b)
	1,401.75	

GRAND TOTAL

$100 + 200 + 300 =$
 $+ 500 - 600 + 700 =$

Operation	Display	Print
GT \times		
100 $\frac{\pm}{\pm}$	100.	100•+
200 $\frac{\pm}{\pm}$	300.	200•+
300 $\frac{\pm}{\pm}$	600.	300•+
\times		003 600•**
	600.	
500 $\frac{\pm}{\pm}$	500.	500•+
600 $\frac{-}{-}$	100.	600•-
700 $\frac{\pm}{\pm}$	600.	700•+
\times		001 600•**
	600.	
GT		1•200•**
	1,200.	

TAX RATE CALCULATIONS

- EXAMPLE 1: Set a 5% tax rate. Calculate the tax on \$800 and calculate the total including tax.

Operation	Display	Print
5 STR	5.	
TAX+		**•5•000 %
	5.000	
		800•
		**•40•
		840•
	840.	

- EXAMPLE 2: Perform two calculations using \$840 and \$525, both of which already include tax. Calculate the tax on the total and the total without tax. (tax rate: 5%)

Operation	Display	Print
840 $\frac{\pm}{\pm}$	840.	840•+
525 $\frac{\pm}{\pm}$	1,365.	525•+
TAX-		1•365•*
		**•65•-
		1•300•
	1,300.	

Caution!
The socket outlet shall be installed near the equipment and shall be easily accessible.

For Europe only:
SHARP ELECTRONICS (Europe) GmbH
SonninstraÙe 3, D-20097 Hamburg

CONVERSION CALCULATION EXAMPLES

EXAMPLE 1: Set the conversion rate (\$1 = ¥123.45).

Operation	Display	Print
* 123.45 STR		
CONV		
		Δ
	123.450	123•450 =

EXAMPLE 2: Convert \$120 to yen (\$1 = ¥123.45).

Operation	Display	Print
120 CONV		
		120•
		14•814•Δ
	14,814.	

EXAMPLE 3: Set the conversion rate (1 meter = 39.3701 inches).

Operation	Display	Print
* 39.3701 STR		
CONV		
		Δ
	39.3701	39•370 =

EXAMPLE 4: Convert 472.4412 inches to meters (1 meter = 39.3701 inches).

Operation	Display	Print
472.4412 CONV		
		472•4412
		12•ΔΔ
	12.	

MEMORY

$46 \times 78 =$ ①
 $+ 125 \div 5 =$ ②
 $- 72 \times 8 =$ ③
Total ④

Operation	Display	Print
MC *		
46 \times	46.	46• \times
78 M+		78•=
	3,588. ^M	3•588•+M ①
125 $\frac{+}{+}$	125. ^M	125• \div
5 M+		5•=
	25. ^M	25•+M ②
72 \times	72. ^M	72• \times
8 M-		8•=
	576. ^M	576•-M ③
DM		3•037•DM ④
	3,037. ^M	

*: Press **MC** to clear the memory before starting a memory calculation.

Information on the Disposal of this Equipment and its Batteries

IF YOU WISH TO DISPOSE OF THIS EQUIPMENT OR ITS BATTERIES, DO NOT USE THE ORDINARY WASTE BIN! DO NOT PUT THEM INTO A FIREPLACE!

1. In the European Union

Used electrical and electronic equipment and batteries must be collected and treated SEPARATELY in accordance with law. This ensures an environment-friendly treatment, promotes recycling of materials, and minimizes final disposal of waste. Each household should participate! ILLEGAL DISPOSAL can be harmful to human health and the environment due to contained hazardous substances! THIS SYMBOL appears on electrical and electronic equipment and batteries (or the packaging) to remind you of that! If 'Hg' or 'Pb' appears below it, this means that the battery contains traces of mercury (Hg) or lead (Pb), respectively.

Take USED EQUIPMENT to a local, usually municipal, collection facility, where available. Before that, remove batteries. Take USED BATTERIES to a battery collection facility; usually a place where new batteries are sold. Ask there for a collection box for used batteries. If in doubt, contact your dealer or local authorities and ask for the correct method of disposal.

2. In other Countries outside the EU

If you wish to discard this product, please contact your local authorities and ask for the correct method of disposal.

ENGLISH