

OPERATIONAL NOTES

To insure trouble-free operation of your SHARP calculator, we recommend the following:

1. Keep the calculator away from extreme heat such as on a car dashboard or near a heater, and avoid exposing it to excessively humid or dusty environments.
2. Clean with a soft, dry cloth. Do not use solvents or a wet cloth. Avoid using a rough cloth or anything else that may cause scratches.
3. 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.
4. If service should be required, use only a SHARP servicing dealer, a SHARP approved service facility or SHARP repair service.
5. This product, including accessories, may change due to upgrading without prior notice.
6. The optional AC adaptor (EA-28A) is not available in some regions. Please ask your SHARP dealer for details.
7. If you pull out the power cord to cut electricity completely or replace the batteries, the presently stored tax rate (discount) / exchange rate and memory contents will be cleared.

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.

OPERATING CONTROLS

POWER SWITCH; PRINT / ITEM COUNT MODE SELECTOR:

- Power OFF.
- Power ON. Set to the non print mode.
- Power ON. Set to the print mode.
- Power ON. Set to the print and item count mode.

1. For addition or subtraction, each time \square is pressed, 1 is added to the item counter, and each time \square is pressed, 1 is subtracted.
 - The count is printed when the calculated result is obtained.
 - Pressing of \square or \square clears the counter.

2. When the grand total/rate setting mode selector is in the ON position (GT), the counter will count the number of times that the calculation results have been stored in the grand total memory. To print and clear the count, press the \square key.

3. The memory item counter will count the number of times that the \square key has been pressed in the addition.

- Note:
- Each time the \square key is used in the subtraction, 1 will be subtracted from the count.
 - The count is printed when the memory is recalled.
 - Pressing of the \square key 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.

ROUNDING SELECTOR:
Example: Set Decimal Selector to 2.
 $4 \div 9 = 0.444\dots$; $5 \div 9 = 0.555\dots$

	4 \square 9 \square	5 \square 9 \square
\uparrow	0.45	0.56
5/4	0.44	0.56
\downarrow	0.44	0.55

- Note:
- The decimal point floats during successive calculation by the use of \square or \square .
 - If the decimal selector is set to "F" then the answer is always rounded down (\downarrow).

GRAND TOTAL / RATE SETTING MODE SELECTOR:

This selector is used to activate the GRAND TOTAL function.

- GT: Grand Total.
- *: Neutral.
- RATE SET: To set the tax rate, set this switch at the "RATE SET" position.

- Tax rate:**
- Press \square three times, enter the tax rate, followed by \square .
 - A maximum of 4 digits can be stored (decimal point is not counted as a digit).
 - Only one rate can be stored. If you enter a new rate, the previous rate will be cleared.

DECIMAL / ADD MODE SELECTOR:

- * 2 0: Presets the number of decimal places in the answer. The answer is displayed in the floating decimal system.
- F: The decimal point in addition and subtraction entries is automatically positioned to the 2nd digit from the lowest digit of entry number. Use of the add mode permits addition and subtraction of numbers without entry of the decimal point. Use of \square and \square will automatically override the add mode and decimally correct answers will be printed.

PAPER FEED KEY LAST DIGIT CORRECTION 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 \square or \square key, the subtotal is printed with the symbol "0" and the calculation may be continued.

- By pressing this key even in the Non-print mode, the displayed number is printed without any symbol.

CLEAR / CLEAR ENTRY KEY:
Press this key twice, followed by \square to print the set tax rate.

TOTAL KEY

EQUAL KEY

CHANGE SIGN KEY:

Changes the algebraic sign of a number (i.e., positive to negative or negative to positive).

RECALL AND CLEAR MEMORY KEY

RECALL MEMORY KEY

TAX-INCLUDING / PRE-TAX KEY:

Used to calculate with the tax rate / discount.

AVERAGE KEY:

Used to calculate the average.

GRAND TOTAL KEY

COST / SELL / MARGIN

CHANGE CALCULATION KEY:

- To see how much change to return, have the price amount displayed, then enter the price amount, followed by this key. The change is calculated in accordance with the DECIMAL / ADD MODE SELECTOR setup as well as the ROUNDING SELECTOR setup.
- The intermediate result of an addition or subtraction in the Change calculation is retained.
- While the POWER SWITCH / PRINT / ITEM COUNT MODE SELECTOR is placed in "P" or "P+IC", the pay amount is printed after "*****" and the changeprinted with "CG".

\square :

\square :

\square :

\square :

\square :

\square :

\square / \square :

\square :

\square :

\square / \square / \square :

\square :

DISPLAY SYMBOLS

- M: Appears when a number is in the memory.
- : Appears when a number is negative.
- G: Appears when a number is in the grand total memory.
- E: Appears when an overflow or other error is detected.
- TAX+: Appears when the total calculated includes tax.
- TAX-: Appears when the total calculated excludes tax.
- TAX: Appears when the tax rate is set.
- Although all available symbols are shown here for instruction purposes, these symbols will not appear on the screen simultaneously.

INK RIBBON REPLACEMENT

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

Ink roller: Type IR-40T (SHARP EA-772R)

WARNING

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

1. Set the power switch to OFF. Make sure that the print wheel has stopped.
2. Remove the printer cover. (Fig. 1)
3. Hold the top of the ink roller and remove the roller by pulling it toward you and then upward. (Fig. 2)
4. Install the new ink roller in the correct position. Make sure that the roller is securely in place. (Fig. 3)
5. Put back the printer cover.

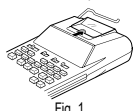


Fig. 1

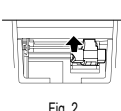


Fig. 2

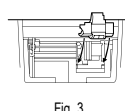


Fig. 3

Cleaning the printing mechanism

If the print becomes dull after long time usage, clean the printing wheel according to the following procedures:

1. Remove the printer cover and the ink roller.
2. Install the paper roll and feed it until it comes out of the front of the printing mechanism.
3. Put a small brush (like a tooth brush) lightly to the printing wheel and clean it by pressing \square .
4. Put back the ink roller and the printer cover.

Note: Do not rotate the printing mechanism manually, this may damage the printer.

PAPER ROLL REPLACEMENT

Never insert paper roll if torn. Doing so will cause paper to jam. Always cut leading edge with scissors first.

1. Insert the leading edge of the paper roll into the opening. (Fig. 1)
2. Turn the power on and feed the paper by pressing \square . (Fig. 2)
3. Lift the attached metal paper holder up and insert the paper roll to the paper holder. (Fig. 3)

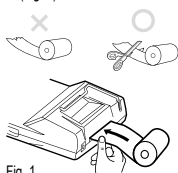


Fig. 1



Fig. 2



Fig. 3

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

BATTERY REPLACEMENT

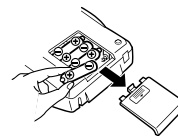
Time for battery replacement

Replace with a new battery once 2 year. When the battery power becomes weak, printing may be halted, and displayed images may disappear. If such symptoms are observed, replace the batteries with new ones.

Battery: Manganese dry battery, size AA (or R6) \times 4

Note: When replacing the battery, the set tax / discount rate and conversion rate, 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.

1. Turn the power switch "OFF" and unplug the power supply plug from the outlet.
2. Remove the battery cover on the back of the unit.
3. Replace the batteries. Be sure that the "+" and "-" marks on the battery correspond to the "+" and "-" marks in the calculator. Always put back the 4 batteries at the same time.
4. Put back the battery cover.
5. Press the RESET switch on the back of the unit.



- Fluid from a leaking battery accidentally entering an eye could result in serious injury. Should this occur, wash with clean water and immediately consult a doctor.
- Should fluid from a leaking battery come in contact with your skin or clothes, immediately wash with clean water.
- If the product is not to be used for some time, to avoid damage to the unit from a leaking battery, remove it and store in a safe place
- Do not leave an exhausted battery inside the product.
- Always put back the 4 batteries at the same time.

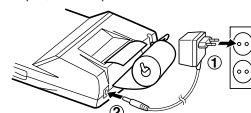
HOW TO CONNECT THE AC ADAPTOR (OPTION)

This machine can also be operated on AC power by use of AC Adaptor. When the AC adaptor is connected to the calculator, the power source is automatically switched over from dry batteries to AC power source.

AC adaptor: Model EA-28A

Make sure that you turn the calculator's power off when connecting or disconnecting the AC adaptor.

To connect the AC adaptor, follow steps ① and ②.



To disconnect the AC adaptor, simply reverse the procedure.

CAUTION

USE OF OTHER THAN THE AC ADAPTOR EA-28A MAY APPLY IMPROPER VOLTAGE TO YOUR SHARP CALCULATOR AND WILL CAUSE DAMAGE.

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 "E 0." is displayed at the time of the error, "-----" will be printed in red and \square must be used to clear the calculator.

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 \square key and then repeat the calculation from the beginning.

Error conditions:

1. When the integer portion of an answer exceeds 12 digits.
2. When the integer portion of the contents of the memory or grand total memory exceeds 12 digits
(Example: \square 999999999999 \square \square \square)
4. When any number is divided by zero.
(Example: $5 \square 0 \square$)

SPECIFICATIONS

Operating capacity: 12 digits
Power source: Operating: 6V (DC) Heavy-duty manganese battery, size AA (or R6) \times 4
AC: Local voltage with AC adaptor EA-28A (Option)

PRINTING SECTION

Printer: Mechanical printer
Printing speed: Approx. 2 lines/sec.
Printing paper: 57mm (2-1/4") - 58mm (2-9/32") wide
80mm (3-5/32") in diameter (max.)

Operating temperature: 0°C - 40°C (32°F - 104°F)
Operation time: Approx. 4,500 hours (in non-print mode, displaying 555555 at 25°C (77°F) ambient temperature)
Operating time depends on the type of battery and type of use.

Dimensions: 150 \times 230 \times 52 mm
Weight: Approx. 455 g (with batteries)
Accessories: 4 heavy-duty manganese battery, 1 paper roll, 1 ink roller and operation manual

WARNING

THE VOLTAGE USED MUST BE THE SAME AS SPECIFIED ON THIS CALCULATOR. USING THIS CALCULATOR WITH A VOLTAGE HIGHER THAN THAT SPECIFIED IS DANGEROUS AND MAY RESULT IN A FIRE OR OTHER TYPE OF ACCIDENT CAUSING DAMAGE. SHARP WILL NOT BE HELD RESPONSIBLE FOR ANY DAMAGE RESULTING FROM USE OF THIS CALCULATOR WITH OTHER THAN THE SPECIFIED VOLTAGE.

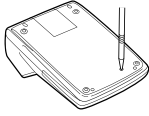
RESETTING THE UNIT

Strong impacts, exposure to electrical fields, or other unusual conditions may render the unit inoperative, and pressing the keys will have no effect. If this occurs, you will have to press the RESET switch on the bottom of the unit. The RESET switch should be pressed only when:

- an abnormal event occurs and all keys are disabled.
- you install or replace the batteries.

Notes:

- Pressing the RESET switch will clear the stored tax rate and other data stored in the memory.
- Use only a ballpoint pen to press the RESET switch. Do not use anything breakable or anything with a sharp tip, such as a needle.
- After the RESET switch is pressed, connect the AC adaptor. Turn the power switch "ON" and check that "0." is displayed.



B. $11.11 \div 77.77 = \textcircled{1}$
 $22.22 \div 77.77 = \textcircled{2}$

11.11 \div	11.11	11•11 \div
77.77 $=$		77•77 =
	0.14285714285	0•14285714285 * $\textcircled{1}$
22.22 $=$		22•22 =
	0.28571428571	0•28571428571 * $\textcircled{2}$

PERCENT

A. $100 \times 25\% =$

100 \times	100.	100• \times
25 $\%$		25• $\%$
	25.00	25•00 *

B. $(123 \div 1368) \times 100 =$

123 \div	123.	123• \div
1368 $\%$		1•368• $\%$
	8.99	8•99 *

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)

$\%$ CE $\%$ CE		
100.55 \div	100.55	100•55 +
200 \div	300.55	200•00 +
\div	500.55	200•00 +
400.55 \div	901.10	400•55 +
500.65 \div	1'401.75	500•65 +
\times		005•••••••••• (a)
	1'401.75	1•401•75 * (b)

CALCULATION EXAMPLES

1. Set the decimal selector as specified in each example. The rounding selector should be in the "5/4" position unless otherwise specified.
2. The Grand Total/rate setting mode selector should be in the "+" position (off) unless otherwise specified.
3. The print / item count mode selector should be in the "P" position unless otherwise specified.
4. Press $\%$ CE $\%$ CE prior to beginning any calculation.
5. If an error is made while entering a number, press $\%$ CE or \leftarrow and enter the correct number.
6. After entering a value, press COST , SELL , or MGN to activate the Cost/Sell/Margin Calculation mode. In case of performing different calculation tasks, $\%$ CE $\%$ CE key must be pressed first to cancel the Cost/Sell/Margin mode.
7. Example procedures are listed in following manner unless otherwise specified:

Operation	Display	Print
-----------	---------	-------

ADDITION AND SUBTRACTION WITH ADD MODE

$12.45 + 16.24 + 19.35 - 5.21 =$

*2 12.45 $+$	12.45	12•45 +
16.24 $+$	28.69	16•24 +
19.35 $+$	48.04	19•35 +
5.21 $-$	42.83	5•21 -
\times		002•••••••••• *
	42.83	42•83 *

*2: \leftarrow was not used in the entries

MIXED CALCULATIONS

A. $5 \times 2 + 12 =$

5 \times	5.	5• \times
2 $=$		2• =
	10.	10• *
$+$	10.	10• +
12 $+$	22.	12• +
\times		002•••••••••• *
	22.	22• *

B. $(10 + 2) \times 5 =$

10 $+$	10.	10• +
2 $+$	12.	2• +
\times	12.	12• \times
5 $=$		5• =
	60.	60• *

CONSTANT

A. $62.35 \times 11.11 = \textcircled{1}$
 $62.35 \times 22.22 = \textcircled{2}$

62.35 \times	62.35	62•35 \times
11.11 $=$		11•11 =
	692.7085	692•7085 * $\textcircled{1}$
22.22 $=$		22•22 =
	1'385.417	1•385•417 * $\textcircled{2}$

AVERAGING

Day	Sales	
Monday	\$123.15	
Tuesday	\$118.00	
Wednesday	\$131.58	
Thursday	\$125.02	
Friday	\$158.25	
Total Sales	\$656.00 for 5 days	
Average Sales	\$131.20	

12315 $+$	123.15	123•15 +
11800 $+$	241.15	118•00 +
13158 $+$	372.73	131•58 +
12502 $+$	497.75	125•02 +
15825 $+$	656.00	158•25 +
\times		005••••••••••
		656•00 *
AVG		131•20 Δ G

TAX RATE CALCULATIONS

A. Set a 5% tax rate. Calculate the total amount for adding a 5% tax to \$800.

$\%$ CE $\%$ CE $\%$ CE 5	5.	
TAX+		
TAX	5.000	•••5•000 %
800 TAX+		800•
		•••40•
		840•
TAX+	840.	

B. 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%)

840 $+$	840.	840• +
525 $+$	1'365.	525• +
TAX-		1•365•
		•••65• -
		1•300•
TAX-	1'300.	

MEMORY

$46 \times 78 = \textcircled{1}$
 $+) 125 \div 5 = \textcircled{2}$
 $-) 72 \times 8 = \textcircled{3}$

Total	④	
*3 M		
46 \times	46.	46• \times
78 M		78• =
	M 3'588.	3•588• +M $\textcircled{1}$
125 \div	M 125.	125• \div
5 M		5• =
	M 25.	25• +M $\textcircled{2}$
72 \times	M 72.	72• \times
8 M		8• =
	M 576.	576• -M $\textcircled{3}$
OM		3•037• OM $\textcircled{4}$
M	M 3'037.	3•037• *M
	3'037.	

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

GRAND TOTAL

$100 + 200 + 300 =$
 $+) 300 + 400 + 700 =$

Grand total		
100 $+$	100.	100• +
200 $+$	300.	200• +
300 $+$	600.	300• +
\times		600• *+ $\textcircled{1}$
G	600.	
300 $+$	G 300.	300• +
400 $+$	G 700.	400• +
500 $+$	G 1'200.	500• +
\times		1•200• *+ $\textcircled{2}$
G	1'200.	
GT	1'800.	1•800• ** $\textcircled{3}$

COST / SELL / MARGIN CALCULATION

A. Determine the cost price for 30% margin when the selling price is set at \$500.
 $\textcircled{1}$ Selling price $\textcircled{2}$ Margin $\textcircled{3}$ Cost price

500 SELL	500.	500• * Δ $\textcircled{1}$
30 MGN	30.	
		30• *% $\textcircled{2}$
	350.	350• *C $\textcircled{3}$

* Entries in the order of *30 MGN 500 SELL are also valid.

B. Determine the selling price for 30% margin when the cost price is set at \$350.

① Cost price ② Margin ③ Selling price



350	<input type="button" value="COST"/>	350.	350•	*C	①
30	<input type="button" value="MGN"/>	30.	30•	*%	②
		500.	500•	*Δ	③

• Entries in the order of "30 350

C. Determine the margin when the cost price is set at \$350, and the selling price at \$500.

① Cost price ② Selling price ③ Margin

Also, obtain the margin when the cost price is set to \$250.



350	<input type="button" value="COST"/>	350.	350•	*C	①
500	<input type="button" value="SELL"/>	500.	500•	*Δ	②
		30.	30•	*%	③

250	<input type="button" value="COST"/>	250.	250•	*C	
	<input type="button" value="SELL"/>		500•	*Δ	
		50.	50•	*%	

• Entries in the order of "500 350

- The entered value (enter value, then press , or) will be kept in the buffer, the re-entry will not be necessary when recalculating.
- The buffer contents will be cleared upon new entry, or when the power switch is turned off/on, or when "E" is displayed.

CHANGE CALCULATION

A. If \$100 is paid for three items costing \$10, \$20, and \$30 respectively, how much change should you return?



10	<input type="button" value="+"/>	10.	10•	+
20	<input type="button" value="+"/>	30.	20•	+
30	<input type="button" value="+"/>	60.	30•	+
	<input type="button" value="*"/>		003•
		60.	60•	*
100	<input type="button" value="CHANGE"/>		
			100•	
			40•	CG

B. How much do you return from \$100 for a purchase of five items costing \$15 each?



15	<input type="button" value="x"/>	15.	15•	x
5	<input type="button" value="="/>		5•	=
		75.	75•	*
100	<input type="button" value="CHANGE"/>		
			100•	
			25•	CG
		25.		

FOR MORE INFORMATION ABOUT SHARP CALCULATORS VISIT:

<http://www.sharp-calculators.com>

ENGLISH

Information on the Disposal of this Equipment and its Batteries

1. In the European Union
Attention: If you want to dispose of this equipment, please do not use the ordinary dust bin!
 Used electrical and electronic equipment must be treated separately and in accordance with legislation that requires proper treatment, recovery and recycling of used electrical and electronic equipment. Following the implementation by member states, private households within the EU states may return their used electrical and electronic equipment to designated collection facilities free of charge*. In some countries* your local retailer may also take back your old product free of charge if you purchase a similar new one.
 *) Please contact your local authority for further details.
 If your used electrical or electronic equipment has batteries or accumulators, please dispose of these separately beforehand according to local requirements.
 By disposing of this product correctly you will help ensure that the waste undergoes the necessary treatment, recovery and recycling and thus prevent potential negative effects on the environment and human health which could otherwise arise due to inappropriate waste handling.

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.

Manufactured by:
SHARP CORPORATION
 1 Takumi-cho, Sakai-ku, Sakai City, Osaka 590-8522, Japan

For EU only:
 Imported into Europe by:
MORAVIA Consulting spol. s r.o.
 Olomoucká 83, 627 00 Brno,
 Czech Republic

For UK only:
 Imported into UK by:
MORAVIA Europe Ltd.
 Belmont House, Station Way, Crawley,
 West Sussex RH10 1JA, Great Britain

SAFETY PRECAUTIONS

CAUTION! Power Outlet
 The socket outlet shall be installed near the equipment and shall be easily accessible.

CAUTION! Notes for handling Lithium batteries

- 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.
- Do not leave an exhausted battery in the equipment.
- Do not expose the battery to water or flame, and do not take it apart.
- Do not ingest battery, Chemical Burn Hazard.
- This product contains coin cell battery. If the coin cell battery is swallowed, it can cause severe internal burns in just 2 hours and can lead to death.
- Keep new and used batteries away from children.
- If the battery compartment does not close securely, stop using the product and keep it away from children.
- If you think batteries might have been swallowed or placed inside any part of the body, seek immediate medical attention.
- This equipment is not suitable for use in locations where children are likely to be present.