ELECTRONIC PRINTING CALCULATOR
OPERATION MANUAL

OPERATIONAL NOTES
To insure trouble-free operation of your SHARP calculator, we recommend the following:
1. Keep the calculator away from extremes 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 water-proof, do not use it or store it where fluids, such as water, can splash onto it. Raindrops, water spray, juice, coffee, steam, perspiration, etc., will also cause malfunction.
4. If the battery for memory protection is not installed, the tax rate / discount rate and conversion rate will be lost when the power supply is turned off. The tax rate / discount rate and conversion rate will be deleted even if the battery for memory protection is removed.
5. Do not send the AC cord around the body or otherwise forcibly bend (or twist) it.
6. Place the product near an easily accessible socket.
7. If service should be required, use only a SHARP servicing dealer, a SHARP approved service facility or SHARP repair service.
8. This product, including accessories, may change due to upgrading without prior notice.

SHARP will not be liable 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.

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
1. Pull out the insulation sheet for the memory protection battery.
2. 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.

OPERATING CONTROLS
POW ER ON SWITCH: When the “Y” side of the power on switch is pressed, the calculator is turned on.
POW ER OFF KEY: When the power key is pressed, the calculator is turned off.
PRINT / ITEM COUNT MODE SELECTOR:
- Set to the non-print mode.
- Set to the print mode.
P+: Set to the print and item count mode.
The counter will count the number of times that has been added in addition.
Notes:
- Each time is used in addition, will be subtracted from the count.
- The count is printed when the calculated result is obtained.
- Pressing or clears the counter.
- The counter has a maximum capacity of 3 digits (up to 999).
- If the count exceeds the maximum, the counter will recount from zero.

R AT E SETTING MODE SELECTOR:
This selection is used to set the conversion rate or the tax / discount rate.
R AT E SET:
Set this selector to the “RATE SET” position before storing each rate.
Conversion rate:
- Enter the conversion rate, then press.
- 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.
- To store a discount rate, press before pressing.
- A maximum of 4 digits can be stored (decimal point is not counted as a digit).
- Press this selector to the “x” position before starting calculations.
Note:
- Be sure to set this selector to the “x” position after storing each rate.
- 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.

CONSTRAINT MOD E SELECTOR:
- The following constant functions will be performed:
  Multiplication: The calculator will automatically remember the first number entered (the multiplicand) and and instruction.
  Division: The calculator will automatically re-
note the second number entered (the divisor) and instruction.

POW ER SUPPLEMENTARY FUNCTION:
- Pressing this key even in the Non-print mode, the displayed number is printed without any symbol.

DISPLAY SYMBOLS:
- First memory symbol. Appears when a number has been stored in First memory.
- Second memory symbol. Appears when a number has been stored in Second memory.
- Minus symbol. Appears when a number is a negative.
- Error symbol. Appears when an overflow or other error is detected.
- Appears when a number is in the grand total memory.
- Although all available symbols are shown here for instruction purposes, these symbols will not appear on the screen simultaneously.

INK RIBBON REPLACEMENT:
1. Remove the old ribbon by pulling it up.
2. Insert the new ribbon.
3. Replace the battery cover by reversing the removal procedure.
4. 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.

 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 “H” or “HE” is displayed at the time of the error, must be used to clear the calculator.
If an “E” with any numerals except zero is displayed, the error may be cleared with or and the calculation can still be continued.
Also, in rare cases, printing may skip midway and the indication “APER” appear on the display. This is not a malfunction but is caused when the calculation is expressed to strong electromagnetic noise or static electricity from an external source. Should this occur, press the key and then repeat the calculation from the beginning.

ERROR CONDITIONS:
1. Entry of more than 12 digits or 11 decimals. This error can be cleared with or.
2. When the integer portion of an answer exceeds 12 digits.
3. When the integer portion of the contents of the memory or grand total memory exceeds 12 digits.

REPLACEMENT OF BATTERY FOR MEMORY PROTECTION
Time for battery replacement
Replace the battery once a 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.

Batteries:
- Lithium battery, size CR2032 × 1
- 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, and/or other important numbers on a sheet of paper.

After battery replacement
By connecting the power supply plug to an outlet and pressing the power on switch, check that “O” is displayed. If “O” is not displayed, remove the battery, rename it, and check the display again.
- Reset the tax / discount rate.
- Reset the tax / discount rate.
- Replace the battery cover by reversing the removal procedure.
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.

**SPECIFICATIONS**

- Operating capacity: 12 digits
- Power source:
  - Operating: AC: 220 – 230 V, 50 Hz
- Memory backup: 3V (DC) (Lithium battery CR2032 × 1)
- Memory Protection Battery lifespan:
  - Approx. 1 year. (tested and confirmed at 25°C (77°F); may change due to usage environment)
- Calculations:
  - Four arithmetic calculations, constant multiplication and division, power calculation, add-on / discount calculation, repeat addition and subtraction, reciprocal calculation, item count calculation, markup calculation, memory calculation, etc.

**PRINTING SECTION**

- Printer: Mechanical printer
- Printing speed: Approx. 4,5 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)
- Power consumption:
  - 76 mA
- Automatic Power-off:
  - Approx. 30 min.
    - (After the Automatic Power-off, press the power on switch that the calculator will resume.)
- Dimensions:
  - 250 × 345 × 78 mm
- Weight:
  - Approx. 2 kg (with battery)

**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.

**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 constant/add mode selector and 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. If an error is made while entering a number, press or and enter the correct number.
5. Negative values are printed with “–” symbol in red.
6. Example procedures are listed in following manner unless otherwise specified.

**REPEAT ADDITION AND SUBTRACTION**

- 123 + 123 = 246
- 123 + 123 = 246
- 123 + 123 = 246
- 123 + 123 = 246
- 567 + 567 = 1,134
- 567 + 567 = 1,134
- 567 + 567 = 1,134
- 567 + 567 = 1,134

**ADDITION AND SUBTRACTION WITH ADD MODE**

- 12.45 + 19.35 + 5.21 = 37.01
- 12.45 + 19.35 + 5.21 = 37.01
- 12.45 + 19.35 + 5.21 = 37.01
- 12.45 + 19.35 + 5.21 = 37.01

**MIXED CALCULATIONS**

A. (10 + 2) × 5 = 60
B. 5 × 2 + 12 = 22

**CONSTANT**

A. 62.35 × 11.11 = 702.26
B. 22.22 × 7.77 = 171.49

**POWER**

A. 5.25² = 27.563
B. 5.25² = 27.563

**PERCENT**

A. 100 × 25% = 25.00

**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.
- Mkp is the percent profit based on cost.
- Mrgn is the percent profit based on selling price.

To find

<table>
<thead>
<tr>
<th>Operation</th>
<th>Knowing</th>
<th>Operation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mkp</td>
<td>Cost</td>
<td>Sell</td>
</tr>
<tr>
<td>Mkp</td>
<td>Sell</td>
<td>Cost</td>
</tr>
<tr>
<td>Mkp</td>
<td>Mkp</td>
<td>Sell</td>
</tr>
<tr>
<td>Mkp</td>
<td>Sell</td>
<td>Mkp</td>
</tr>
</tbody>
</table>

Example:

- Cost = $200
- Sell = $250
- GP = 25%
- Mkp = 20%
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.

PERCENT PRORATION
Calculate the percentage of each of the parts to the whole.

ITEM COUNT CALCULATION
Bill No. | Number of bills | Amount
---|---|---
1 | 1 | $100.00
2 | 1 | $200.00
3 | 1 | $200.00
4 | 1 | $400.05
5 | 1 | $500.65
Total | 100.55 | 200.00 | 300.55 | 500.05 | 400.55 | 1,401.75

DISCOUNT RATE CALCULATION
A. Set an 8% discount rate.

CONVERSION CALCULATION EXAMPLES
A. Set the conversion rate ($1 = ¥123.45).

B. Convert $120 to yen ($1 = ¥123.45).
<table>
<thead>
<tr>
<th>INFORMATION ON THE DISPOSAL OF THIS EQUIPMENT AND ITS BATTERIES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. In the European Union</strong></td>
</tr>
<tr>
<td>Attention: If you want to dispose of this equipment, please do not use the ordinary dust bin!</td>
</tr>
<tr>
<td>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 of 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 used product free of charge if you purchase a similar new one.*</td>
</tr>
<tr>
<td>*Please contact your local authority for further details.</td>
</tr>
<tr>
<td>If your used electrical or electronic equipment has batteries or accumulators, please dispose of these separately beforehand according to local requirements.</td>
</tr>
<tr>
<td>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.</td>
</tr>
<tr>
<td><strong>2. In other Countries outside the EU</strong></td>
</tr>
<tr>
<td>If you wish to discard this product, please contact your local authorities and ask for the correct method of disposal.</td>
</tr>
</tbody>
</table>

---

**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 incinerate it.
- 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.

---

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