## SHARP

ELECTRONIC
PRINTING CALCULATOR
CS－2635RHGYSE

## OPERATION MANUAL

## 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 mafunction．
4．If the battery for memory protection is not installed，the tax rate／discount and conversion rate will be lost when the power supply is turned off．The tax rate discount and conversion rate will be deleted even if the battery for memor protection is removed．
5．Do not wind 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 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．

## 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

I ：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＂will be printed．）
P＂：Set to the print mode．
$\cdots \cdot . . . \cdot+P^{\prime \prime}$ will be printed．）
＂P•IC＂：Set to the print and item count mode． The counter will count the number of times that囬has been pressed in addition．
Notes：
－Each time $\square$ is used in subtraction， 1 will be subtracted from he count
－The count is printed when the calculated result is obtained －Pressing of $\boxplus, \boxed{*}$ ，or $\mp$ clears the counter．
－The counter has a maximum capacity of 3 digits（up to $\pm 999$ ）． It the count exceeds the maximum，the counter will recount from zero．

RATE SETTING MODE SELECTOR
This selector is used to set the conversion rate or the tax／discount rate．
＂RATE SET＂：Set this selector to the＂RATE SET＂position before storing an each rate．
Conversion rate．
－Enter the conversion rate，then press $\sqrt{\text { 区Ratrate }}$ ． A maximum of 6 digits can be stored（decima point is not counted as a digit）．
Tax／discount rate：
－Enter the adding tax rate，then press 龱t．
－To store a discount rate，press + ＋ before pressing 四
A maximum of 4 digits can be stored（decimal point is not counted as a digit）．
＂＊＂：Set this selector to the＂0＂position before starting calculations．
Note
－Be sure to set this selector to the＂＂＂position after storing an 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．
$K \cdot A$
$A^{\prime \prime}$
＂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 $*, \boxtimes$ and $\rightarrow$ will automatically overide the Add mode and decimally correct answers will be printed at the preset decimal position．
ROUNDING SELECTOR：
Example：Set decimal selector to＂2＂．
$4 \div 9=0,444 \ldots ; 5 \div 9=0,555 \ldots$

|  | $4 母 9$ 国 | $5 母 9$ 国 |
| :--- | :---: | :---: |
| $\uparrow$ | 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 $\boldsymbol{x}$ or $\oplus$
If the decimal selector is set to＂$F$＂then the answer is always rounded down（ $\boldsymbol{\downarrow}$ ）．

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

## PAPER FEED KEY

ERARE：CONVERSION KEY：
This key is used to obtain a value by dividing a given number with a specified conversion rate．
WRARE ：CONVERSION KEY：
This key is used：
－To store the conversion rate（by the use of the rate setting mode selector）．
－Obtains a value by multiplying a given number with a specified conversion rate．
－To recall the presently stored rate for check．Press＊first to clear the calculation register and reset an error condition，then press xante．
The conversion rate is printed with the symbol＂TC＂．
：LAST DIGIT CORRECTION KEY
CE：CLEAR ENTRY KEY：
Clears numbers entered prior to use of a function key．Also used to clear an overflow error caused by an entry．
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 ${ }_{\underline{t}}$ or $E$ key，the subtotal is printed with the symbol ＂$\rangle$＂and the calculation may be continued．
By pressing this key even in the Non－print mode，the displayed number is printed without any symbol．

## TOTAL KEY：

Prints the total of addition and subtraction with＂＊＂．This key also serves as a clear key for the calculation register and resets an rror condition．
OM ：FIRST RECALL MEMORY KEY
＊M：FIRST RECALL AND CLEAR MEMORY KEY
SECOND RECALL MEMORY KEY
SECOND RECALL AND CLEAR MEMORY KEY
CHANGE SIGN KEY：
Changes the algebraic sign of a number（i．e．positive to negative or negative to positive）．
MU）：MULTIPLE USE KEY
Performs mark－ups，percent change and automatic add－on／discount．
TTXX：：TAX－INCLUDING KEY：
This key is used for calculations with the tax／discount rate．To recall the presently stored rate for check，press＊to clear the calculation register and reset an error condition，then press $\sqrt{\text { waxt }}$ ．
The tax／discount rate is printed with the symbol＂TX＂
DISPLAY SYMBOLS
M ：First memory symbol．Appears when a number has been stored in First memory．
I：Second memory symbol．Appears when a number has been stored in Second memory．
Minus symbol．Appears when a number is a negative．
E ：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 paper roll from the calculator．（Tear the paper and remove it from the print mechanism by using（ ${ }^{\circ}$ ）
2．Turn the power off before replacing ribbon．
3．Remove the printer cover．（Fig．1）
4．Remove the old ribbon by pulling it up．
5．Insert the new ribbon．
6．With the black side of the ribbon facing upwards，place one of the reels on the reel shaft on the right．（Fig．2）Make sure that the reel is securely in place
7．Thread the ribbon around the outside of the metal guides．（Fig．3）
8．Take up any slack by manually turning one of the reels．
9．Replace the printer cover．（Fig．4）
10．Replace the paper roll．


Fig． 3


## PAPER ROLL REPLACEMENT

1．Lift the paper holder up．（Fig．1）
2．Fold the leading edge of the paper roll 3 to 5 cm ．（Do not fold it slantwise．）（Fig．2）
3．Insert the paper roll from the left side of the paper holder and make sure the pape
roll is set in the proper direction（with the paper feeding from the bottom）．（Fig．3）
4．Insert the leading edge of the paper into the opening directly behind the print mechanism．（Fig．4）
5．Press the paper feed key and feed the paper under the edge of the paper cutter． （Fig．5）


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 Occurs＂E＂will be display The content of the mory the tim of the are retained．
If an＂ $0 \cdot E$＂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 © CE or $\rightarrow$ 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＊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 国 or $\rightarrow$ ．
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．
（Example：© $999999999999 ~(\mathbb{M}+1 \times+$ ）
．When any number is divided by zero．
（Example：5 5 0男）

## REPLACEMENT OF BATTERY FOR MEMORY PROTECTION

## Time for battery replacement

Replace with a new 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．

## Battery：lithium battery，size CR2032 $\times 1$

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，other important numbers on a sheet of paper．
1．Press the power off key and unplug the power supply plug from the outlet． 2．Remove the battery cover on the back of the unit．
3．Remove the exhausted battery and install one new lithium battery．Wipe the battery well with a dry cloth and place the plus＂+ ＂side upward．
4．Replace the battery cover by reversing the removal procedure．
5．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．


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．
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．

## 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

## PECIFICATIONS

Operating capacity： 12 dig
Power source：Operating：AC： $220-230 \mathrm{~V}, 50 \mathrm{~Hz}$
Memory backup：3V $\ldots$（DC）（Lithium battery CR2032 $\times 1$
Memory Protection Battery lifespan：
Approx． 1 year．（tested and confirmed at $25^{\circ} \mathrm{C}\left(77^{\circ} \mathrm{F}\right)$ ；may change due to usage environment）
Calculations：Four arithmetic calculations，constant multiplication and divi－ sion，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：$\quad 57 \mathrm{~mm}\left(2-1 / 4^{\prime \prime}\right)-58 \mathrm{~mm}\left(2-9 / 32^{\prime \prime}\right)$ wide $80 \mathrm{~mm}\left(3-5 / 32^{\prime \prime}\right)$ in diameter（max．）
Operating temperature $0^{\circ} \mathrm{C}-40^{\circ} \mathrm{C}\left(32^{\circ} \mathrm{F}-104^{\circ} \mathrm{F}\right)$
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．）
the calculator will res
Approx． 2 kg （with battery）
1 lithium battery（installed）， 1 paper roll， 1 ink ribbon（installed） and operation manual

## WARNING

THE VOLTAGE USED MUST BE THE SAME AS SPECIFIED ON THIS CALCU－ LATOR．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 wil have to press the RESET switch on the bottom of the unit．The RESET switch should e 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 printlitem count mode selector should be in the＂$P$＂position unless otherwise specified．
4．If an error is made while entering a number，press C⿴囗口 $\rightarrow$ 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：

| Operation | Display | Print |
| :--- | :--- | :--- |

Note：
All totals and sub－totals may be used for further calculations．
RE－ENTER the number into the calculator by using the FUNCTION key and continue the problem．

EXAMPLE：

| 23＋456） | $2=$ | $\stackrel{\text { F643210 }}{\square}$ |
| :---: | :---: | :---: |
| $123 \pm$ | $123.00+$ | ＊Znovu zadejte částku |
| $456 \pm$ | $456.00+$ |  |
| ＊ | 579.00 ＊ |  |
| $\pm$ | ＊ $579.00 \times$ |  |
| $2 \pm$ | $2 \cdot=$ |  |
|  | 1，158．00＊ |  |

REPEAT ADDITION AND SUBTRACTION
$123+123+123+456-100-100=$
F643210

| $123 \pm$ | 123. | $123 \cdot+$ |
| :---: | :---: | :---: |
| $\pm$ | 246. | $123 \cdot+$ |
| $\pm$ | 369. | 123．＋ |
| $456 \pm$ | 825. | 456．＋ |
| $100-$ | 725. | 100．－ |
| $-$ | 625. | 100－－ |
| ＊ |  | 625＊ |
|  | 625. |  |

ADDITION AND SUBTRACTION WITH ADD MODE
$12.45+16.24+19.35-5.21=\stackrel{\mathrm{K} \cdot \mathrm{A}}{\square} \stackrel{\mathrm{F} 643210}{\square}$

| 1245 \＃ | 12.45 | $12 \cdot 45+$ |
| :---: | :---: | :---: |
| 1624 \＃ | 28.69 | $16 \cdot 24+$ |
| 1935 \＃ | 48.04 | $19 \cdot 35+$ |
| 521 － | 42.83 | $5 \cdot 21$－ |
| ＊ |  | 42．83＊ |
|  | 42.83 |  |

＊：$\square$ was not used in the entries

MIXED CALCULATIONS

| A．$(10+2) \times 5=$ |  | $\stackrel{F 643210}{\square}$ |  |
| :---: | :---: | :---: | :---: |
| $10 \pm$ | 10. | $10 \cdot+$ |  |
| $2 \pm$ | 12. | $2 \cdot+$ |  |
| x |  | $12 \cdot \checkmark$ |  |
|  | 12. | 12．$\times$ |  |
| $5 \stackrel{+}{ \pm}$ |  | $5 \cdot=$ |  |
|  |  | 60＊＊ |  |
|  | 60. |  |  |


| B． $5 \times 2+12=$ |  |  | F643210 |
| :---: | :---: | :---: | :---: |
|  | 5. | 5．$\times$ |  |
| $2 \pm$ |  | $2 \cdot=$ |  |
|  |  | 10＊＊ |  |
|  | 10. |  |  |
| $\pm$ | 10. | $10 \cdot+$ |  |
| $12 \pm$ | 22. | $12 \cdot+$ |  |
|  |  | 22－＊ |  |
|  | 22. |  |  |

CONSTANT

| A．$\frac{62.35 \times 1}{62.35 \times 2}$ | $\begin{aligned} & 1=(1) \\ & 2=(2) \end{aligned}$ | $\stackrel{\mathrm{K} \cdot \mathrm{A}}{\text { F643210 }}$ |
| :---: | :---: | :---: |
| $62.35 \times$ | 62.35 | $62.35 \times$ |
| 11.11 ＋ |  | 11．11＝K |
|  |  | 692．71＊（1） |
|  | 692.71 |  |
| $22.22 \pm$ |  | $22 \cdot 22=\mathrm{K}$ |
|  |  | 1，385．42＊（2） |
|  | 1，385．42 |  |



## POWER



| B． $5^{3}=$ |  |  |
| :---: | :---: | :---: |
| $5 \times$ | 5. | $5 \cdot \times$ |
|  |  | 5．$=\mathrm{K}$ |
|  |  | 25－＊ |
|  | 25. |  |
| $\pm$ |  | $25 \cdot=\mathrm{K}$ |
|  |  | 125＊＊ |
|  | 125. |  |
| $5 \begin{array}{r}\text { ¢ } \\ \\ \\ \\ x \\ x \\ \hline\end{array}$ |  | $\stackrel{\mathrm{K} \cdot \mathrm{A}}{\square} \stackrel{\mathrm{F} 643210}{\square}$ |
|  | 5. | $5 \cdot \times$ |
|  | 25. | $5 \cdot \times$ |
|  |  | $5 \cdot=$ |
|  |  | 125＊ |
|  | 125. |  |

PERCENT

| A． $100 \times 25 \%=$ |
| :--- |
| $100 \times x$ |
| $25 \%$ |
|  |

RECIPROCAL

| $\frac{1}{7}=$ |  | $\stackrel{\text { F／4 } \downarrow \text { F643210 }}{\square}$ |
| :---: | :---: | :---: |
| $7 \square$ | 7. | $7 \cdot \div$ |
| $\div$ | 1. | 7．$\div$ |
| $\dagger$ |  | 7．$=$ |
|  |  | 0．14285714285＊ |
|  | 0.14285714285 |  |

ADD－ON AND DISCOUNT
A．5\％add－on to 100


B． $10 \%$ discount on 100 ．


## 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．



|  | ENGLISH |
| :---: | :---: |
|  | Information on the Disposal of this Equipment and its Batteries |
|  | 1. In the European Union |
| Attention: | Attention: If you want to dispose of this equipment, please do not use the ordinary dust bin! |
| Your product is marked with this | Used electrical and electronic equipment must be treated separately |
|  | and in accordance with legislation that requires proper treatment, |
| symbol. It means that used electrical | Following the implementation by member states, private households |
| that used electrical and electronic | within the EU states may return their used electrical and electronic |
| products shouldnot be mixed withgeneral household | equipment to designated collection facilities free of charge*. In some |
|  | countries* your local retailer may also take back your old product |
| waste. There is a separate collection system for these products. | free of charge if you purchase a similar new one. |
|  | If your used electrical or electronic equipment has batteries or accu- |
|  | mulators, 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 recyc- |
|  | ling 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 authori- |

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

| For EU only: |
| :--- |
| Imported into Europe by: <br> MORAVIA Consulting spol. s r.o. <br> Olomoucká 83,62700 Brno, <br> Czech Republic |

For UK only:
Imported into Europe by:
Olomoucká 83,62700 Brno,
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. - 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.
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, - This equipment is not suitable for use in locations where children are likely to be present.

