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:

The following constant functions will be performed: Multiplication: The calculator will automatically remember the first number entered (the multiplicand) and $x$ instruction.
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 $*, x$ and $\dot{+}$ will automatically overide the Add mode and decimally correct answers will be printed at the preset decimal position.

| ROUNDING SELECTOR: |  |
| :--- | :--- |
| " $":$ | An answer is rounded up. |
| " $5 / 4 ":$ | An answer is rounded off. |
| " $\downarrow$ ": | An answer is rounded down. |

Note: An answer is rounded up. An answer is rounded down.

- The decimal point floats during successive calculation by the use of $x$ or $\div$.
If the decimal selector is set to " $F$ " then the answer is always rounded down ( $\mathbf{\downarrow}$ ).

GRAND TOTAL/RATE SETTING MODE SELECTOR: GT": Grand Total
"':
"RATE SET": To set the date/time, tax rate/discount and conversion rate, set this switch at the "RATE SET" position.
Date:

- Enter in the order of day, month and year, then press $0 / 0$ to complete the entry.
- Use - to separate day, month, and year. - When $0 / 6$ is pressed, the number entered is evaluated and displayed as "date" if the value is within the following range; "Error" is displayed otherwise, and the previously set date is restored.
Month: 1-12; day: 1-31; Year: 2000-2099 (in 4 digits) or $00-99$ (in 2 digits)
Time:
- Enter in the order of hour, minutes, then press 9/0 to complete the entry.
(There is no entry available for the seconds
value. The clock starts at zero second.)
- If the hour/minute digit is less than 10 , it is not necessary to enter the first digit "0"
- Use - to separate hour and minute values. - When $6 /$ /h is pressed, the number entered is evaluated and displayed as "time" if the value is within the following range; "Error" is displayed otherwise, and the previously set time is restored.
Hour: 0-23
Minute: 0-59
Conversion rate:
- Press * twice, enter the conversion rate, followed by XRATE.
- A maximum of 6 digits can be stored (decimal point is not counted as a digit)
Tax/discount rate:
- Press * twice, enter the tax rate, followed by tax .
- Press * twice, enter the discount rate, followed by $\dagger /$ then TAX + .
- A maximum of 4 digits can be stored (decimal point is not counted as a digit)
Note:
- Be sure to set this selector to the "v" position after storing an each rate.
- Only one rate can be stored. If you enter a new rate, the previous rate will be cleared
TIME CALCULATION KEY
- Utilize this key to enter hours and minutes in time calculations.
- Press this key after entering an hour or minute value. (There is no need to press this key when entering a second value.)
- To bypass hour entry, press this key after entering 0 .

To bypass minute entry, you may press this key alone, or press it after entering 0 .
-When this key is pressed, if the preceding entry is in any of the following ranges, it is set as an hour or minute value: Hour: $\quad$ Within 6 digits
Minute: $\quad 0$ to 99 (An entry above 60 is rounded up to one hour. If a value of more than 3 digits is entered only the least significant two digits take effect.)

- A second value is set when it is entered in the following range:

Second: 0 to 99 (An entry above 60 is rounded up to one lo I In a lo to one only the least significant two digits take effect.)
O/: CLOCK/CALENDAR KEY:

- Each time this key is pressed, the mode switches

Calculation mode $\rightarrow$ Date display mode $\rightarrow$ Clock display mode $\rightarrow$ Calculation mode
Use this key also to adjust date and time (see "GRAND TOTAL) RATE SETTING MODE SELECTOR").

| (1) $0^{\circ}$ | * $\bigcirc \bigcirc \bigcirc$ |
| :---: | :---: |
|  | * ....... |

LAST DIGIT CORRECTION KEY
GRAND TOTAL KEY
CLEAR ENTRY KEY

## TOTAL KEY

Press this key twice, followed by TAXX, to print the set tax rate
The tax rate is printed with the symbol "TX".
CHANGE SIGN KEY
MARKUP KEY
MEMORY TOTAL CLEAR KEY
MEMORY SUBTOTAL RECALL KEY
MEMORY PLUS/MINUS KEY
TAX-INCLUDING/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 a number in the Print mode, the entry is srinted
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 $\ddagger$ or $-=$ 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
- When Date or Clock is displayed, press this key to print the displayed contents, including "\#" symbol, from the left side of the paper roll.
Example:
Date printing
\#15•09•2021•....
(when the date is September 15, 2021)
Clock printing
\#10•30
(when the time is 10:30 a.m.)
\#18. 25
(when the time is $6: 25$ p.m. (18:25))
- When the Date / Clock printing is complete, the Calculation mode is restored.


## AVERAGE KEY

KRATE: 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 区RATE. The conversion rate is printed with the symbol "TC"
+RATE : CONVERSION KEY:
This key is used to obtain a value by dividing a given number with a specified conversion rate.


## DISPLAY SYMBOLS

M : Appears when a number is in the memory
E: Appears when a number is negative
: Appas win ovow in ietecled.

- 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 if from
the print mechanism by using $\mid$ |xT|
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)
. Take up any slack by manually turning one of the reels.
8. Replace the printer cover. (Fig. 4)
9. Replace the paper roll.


Fig. 2


## 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 $\times$ TT. (Fig. 2)
3. Lift the attached metal paper holder up and insert the paper roll to the paper holder.


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 " $0 \cdot \mathrm{E}$ " is displayed at the time of the error, $*$ must be used to clear the calculaor. 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 $C E$ or $\rightarrow$.
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: *M $999999999999 \boxed{M+1} 1 \boxed{M+}$
3. When any number is divided by zero.
(Example: $5 \div 0 \div$

## REPLACEMENT OF BATTERY FOR MEMORY PROTECTION

## Time for battery replacement

Life of the memory protection battery is approximately 2,500 hours at $25^{\circ} \mathrm{C}$ with the power plug not connected to the socket.
*When the memory protection battery is weak, the date/time setting is initialized. Verify the date/time setting in the date/clock display mode when connecting the power plug to the socket.
If the date/time setting is modified or incorrect, promptly replace the memory protection
battery with new one.
(The life of the pre-installed battery may be shorter than expected because of the time the calculator spends during shipment.)
Battery: lithium battery, size CR2032 $\times 1$
Caution: Replacing the battery will clear the date and time settings, as well as the conversion rate, and the taxdiscount rate.

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.
. Remove the exhausted battery and install one new lithium battery. Wipe the battery well with a dry cloth and place the plus " + " side upward.
Replace the battery cover by reversing the removal procedure
3. 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.

- Reconfigure date, time, conversion rate, and tax/discount rate


## Precautions on battery use

- Do not leave an exhausted battery in the equipmen
- 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.

## SPECIFICATIONS

Operating capacity: 12 digits
Power source: Operating: AC: $220-230 \mathrm{~V}, 50 \mathrm{~Hz}$ Memory backup: $3 \mathrm{~V}-\ldots$ (DC) (Lithium battery CR2032 $\times 1$ )
Memory Protection Battery lifespan.
About 2,500 hours (While at $25^{\circ} \mathrm{C}$, and the power plug is not connected to the socket.)
CLOCK SECTION
Accuracy: $\quad$ Within $\pm 90$ seconds per month average (at $25^{\circ} \mathrm{C}$ )
Items to be displayed: Day, month, year, hour, minute, second
Items to be printed: Day, month, year, hour, minute
Time system: 24-hour
PRINTING SECTION

Printing speed. Approx. 4,5 lines/sec.
$80 \mathrm{~mm}\left(3-5 / 32^{\prime \prime}\right)$ 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: 89 mA
Automatic Power-off: Approx. 30 min

|  | After the Automatic Power-off, press the power on switch <br> that the calculator will resume. |
| :--- | :--- |
| Dimensions: $\quad 222 \times 327 \times 78 \mathrm{~mm}$ |  |
| Weight: | Approx. 1810 g (with battery) <br> Accessories: <br> 1 lithium battery (installed), 1 paper roll, 1 ink ribbon (installed) |

## 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 " 4 " position (off) unless otherwise specified.
3. The printitem count mode selector should be in the "P" position unless otherwise specified
4. If an error is made while entering a number, press CE or $\rightarrow$ 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 |
| :--- | :--- | :--- |

PRINTING DATE AND TIME
EXAMPLE:When on October 20, 2021, 1:52:00 p.m. (13:52).

| (8/- | 20.10.2021 |  |
| :---: | :---: | :---: |
| \#/ $/$ | 0. | \#20-10•2021 - . . |
| 6/80/6 | 13-52 00 |  |
| \#/ ${ }^{\text {\% }}$ | 0. | \#13. 52 |

*: If the date is not shown on the display, press $8 / /{ }^{\text {a }}$ to show the date.

MIXED CALCULATIONS

| $\underline{(240+180+180-75) \times 8=}$ |  | F632 |
| :---: | :---: | :---: |
| $240 \pm$ | 240. | $240 \cdot+$ |
| $180 \stackrel{ \pm}{ \pm}$ | 420. | $180 \cdot+$ |
| $\pm$ | 600. | 180•+ |
| $75-=$ | 525. | 75. - |
| $x$ |  | $525 \cdot$ - |
| $8 \pm$ | 525. | $\begin{array}{r} 525 \cdot \times \\ 8 \cdot= \end{array}$ |
|  |  | 4,200** |
|  | 4,200. |  |

ADDITION AND SUBTRACTION WITH ADD MODE


| $123+\underline{56} \rightarrow 123+\underline{56}$ |  |  |
| :---: | :---: | :---: |
| $123 \stackrel{\square}{\ddagger}$ | 123. | $123 \cdot+$ |
| 556 CE | 0. |  |
| $456 \pm$ | 579. | 465• + |
| * |  | 579** |
|  | 579. |  |


| $\underline{1234567} \rightarrow 12345 \underline{\underline{8}}$ |  | $\begin{array}{r}\text { F63210 } \\ \square \quad \text { T } \\ \hline\end{array}$ |
| :---: | :---: | :---: |
| 1234567 | 1,234,567. |  |
| $\rightarrow$ | 123,456. |  |
| $\rightarrow$ | 12,345. |  |
| 78 | 1,234,578. |  |



## 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 | -- | Sell | $\pm$ | MU |
| Mkup | Sell, Cost | Sell | $\pm$ | Cost | -= | MU |
| Sell | Cost, Mrgn | Cost | $\div$ | Mrgn | MU |  |
| Cost | Sell, Mrgn | Sell | $x$ | Mrgn | +/3 | MU |
| Sell | Cost, Mkup | Cost | $x$ | Mkup | MU |  |
| Cost | Sell, Mkup | Sell | $\div$ | Mkup | +/3 | MU |

Example:

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


| $(123 \div 1368) \times 100=$ |  |  | $\begin{array}{r}\text { F63210 } \\ \square \\ \hline\end{array}$ |
| :---: | :---: | :---: | :---: |
| $200 \div$ | 200. | 200• - | Cost |
| 20 MU |  | 20. \%M | Mrgn |
|  |  | $\begin{gathered} 250 \cdot 00 * \\ 50 \cdot 00 \mathrm{GP} \end{gathered}$ | $\begin{aligned} & \text { Sell } \\ & \text { GP } \end{aligned}$ |
|  | 50.00 |  |  |

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.

|  |  |  | $\begin{array}{r}\text { F63210 } \\ \square \\ \hline\end{array}$ |
| :---: | :---: | :---: | :---: |
| $1 5 0 0 \longdiv { \pm }$ | 1,500.00 | 1,500•00 + |  |
| $1300-=$ | 200.00 | 1,300.00 - |  |
| MU |  | $200 \cdot 00$ * | (a) |
|  |  | $15 \cdot 38$ \%C | (b) |
|  | 15.38 |  |  |

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) |



| 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 | $\$ 131.20$ |



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


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


Set the conversion rate ( 1 meter $=39.3701$ inches).


Convert 472.4412 inches to meters ( 1 meter $=39.3701$ inches).


TIME CALCULATIONS
4 hours 15 minutes 20 seconds +3 hours 50 minutes 18 seconds =
$\stackrel{\text { F63210 }}{\square}$

| * |  |  |
| :---: | :---: | :---: |
| 4 [ALC) | 4_00_-- |  |
| 15 CTMLE | 4_15_00 |  |
| $20 \pm$ | 4_15_20 | $4 \cdot 15 \cdot 20+$ |
| 3 TMME | 3_00_-- |  |
| 50 ¢ 7 CME | 3_50_00 |  |
| $18 \pm$ | 8_05_38 | 3.50.18 + |
| * |  | 8.05.38 * |
|  | 8_05_38 |  |

Calculate the payroll amount at an hourly rate of $\$ 15$ for the total number of hours worked for 7 hours 45 minutes per day for five days.

|  |  | F63210 |
| :---: | :---: | :---: |
| * |  |  |
| 7 (TMALC | 7_00_-- |  |
| $45 \times$ | 7_45_00 | $7 \cdot 45 \cdot 00 \times$ |
| $5 \square$ |  | 5• = |
|  |  | 38.75 * |
|  | 38.75 |  |
| $x$ | 38.75 | $38.75 \times$ |
| $15 \pm$ |  | $15 \cdot=$ |
|  |  | 581-25* |
|  | 581.25 |  |

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! |
| Your product is | Used electrical and electronic equipment must be treated separately |
|  |  |
| symbol. It means that used electrical | onic equipm |
| and electronic | wing the implementation by member states, private households the EU states may return their used electrical and electronic |
| products should not be mixed with general household | ment to designated collection facilites fee |
|  | tres ${ }^{\star}$ your local retailer may also take back your old product |
|  | free of charge if you purchase a simila |
| waste. There is a separate collection system for these products. | ${ }^{*}$ ) 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 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- |
|  | ties 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: <br> MORAVIA Consulting spol. s r.o. <br> OOlomoucká 83,62700 Brno, <br> Czech Republic |


| 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 outtet 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
- 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.
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 suitabtion
-This equipment is not suitable for use in locations where children are likely to be present.

