

brother®

USER'S
GUIDE **EP**

TABLE

1. INTR

2. COM

3. TYPI

4. CAL

5. MAI

6. APP

Thank you for purchasing the Brother We are sure you will find it a convenient, efficient, and reliable communications tool.

For proper performance and prolonged trouble-free service, please read this User's Guide, follow its advice, and keep it for reference.

If you have any questions or problems contact your dealer.

FCC NOTICE

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient the receiving antenna
- Relocate the computer with respect to the receiver
- Move the computer away from the receiver
- Plug the computer into a different outlet so that computer and receiver are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful: "How to Identify and Resolve Radio-TV Interference Problems". This booklet is available from the US Government Printing Office, Washington, D.C., 20402, Stock No. 004-000-00345-4.

Parts Identification

Display Indicators

- NP** Non-Print mode
- 1, 1-1/2, 2** Line space settings
- AUTO** Automatic carrier return mode
- L/L** Line by line mode
- , ▨, ■** Density settings

Display Indicators

- EXPAND** Expanded printing mode
- BOLD** Bold printing mode
- UNDL** Automatic Underline mode
- BATTERY** Weak battery

Platen Knob

Manual paper movement

Cassette Ribbon

Calculator Keys

- C** Clear
- ×** Multiply
- ÷** Divide
- Subtract
- +** Add
- %** Percent
- =** Equal

Margin and Tab Keys

- LM/RM** Left Margin/Right Margin set
- TAB +** Tab set
- TAB -** Tab clear
- MR** Margin Release
- TAB** Tabulator

Expansion Keys

- SHIFT LOCK** Type continuous upper case letters
- shift lamp** Lock indicator
- SHIFT** Type upper case letters, release SHIFT LOCK

Paper Holder

Display

CODE

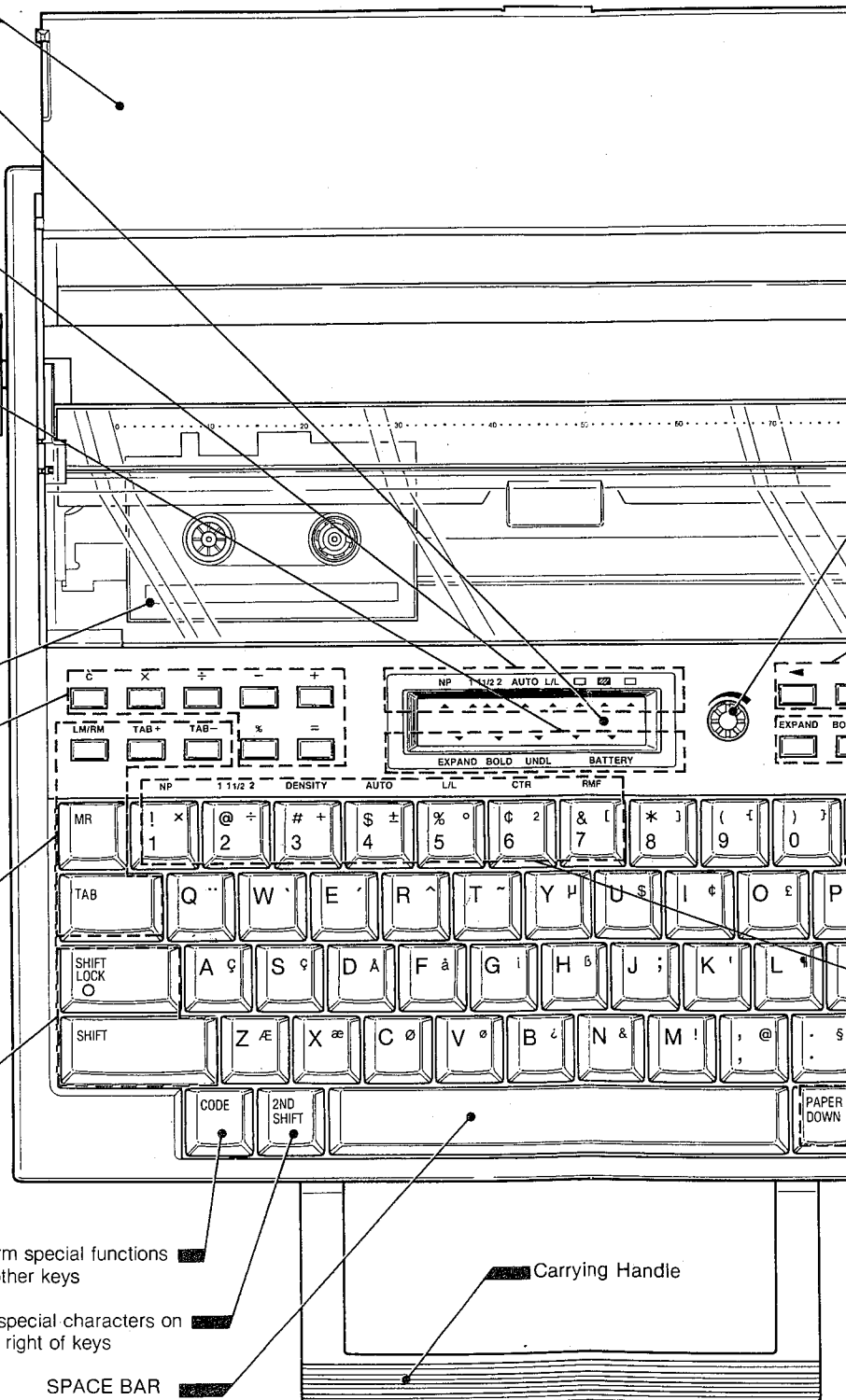
Perform special functions with other keys

2ND SHIFT

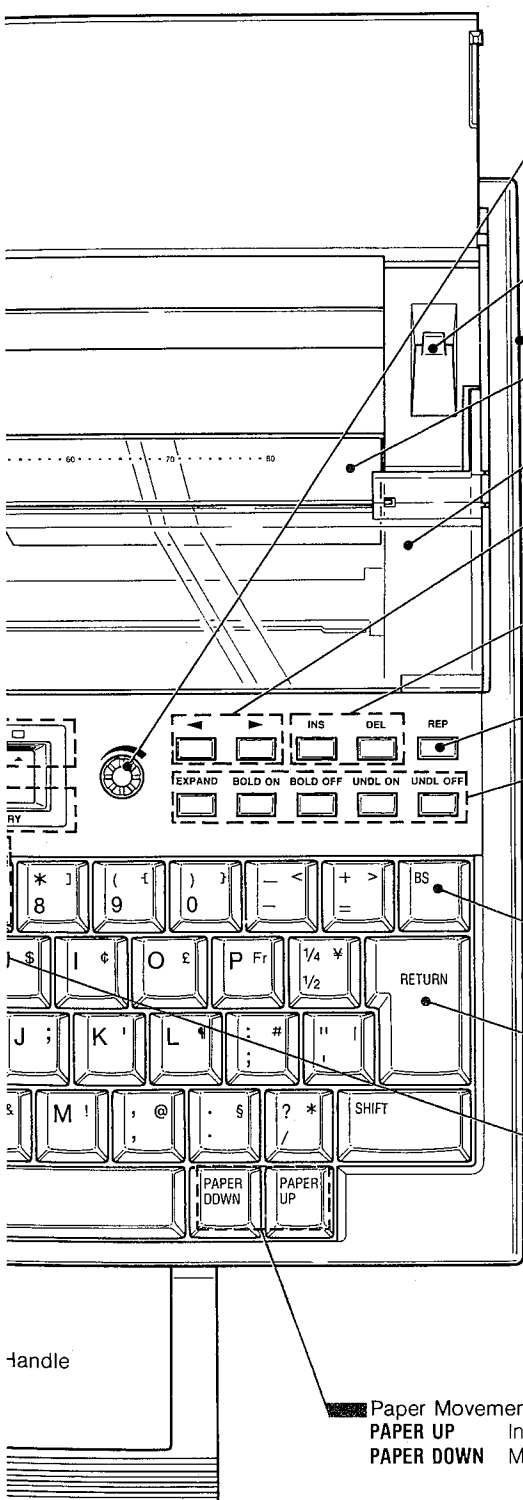
Type special characters on upper right of keys

SPACE BAR

Carrying Handle



TABLE



Display Adjuster
Set display density

Paper Release Lever

Power Switch
AC Adaptor Jack

Cassette Cover Scale

Cassette Cover

Cursor Left Key
◀ Move cursor to left
Cursor Right Key
▶ Move cursor to Right

Correction Keys
INS Insert key: Insert characters to display
DEL Delete key: Delete characters from display
REPEAT Key Repeat a depressed key

Function Keys
EXPAND Start/stop printing expanded characters
BOLD ON Start printing bold characters
BOLD OFF Stop printing bold characters
UNDL ON Start underlining characters
UNDL OFF Stop underlining characters

BACKSPACE Delete characters from display

RETURN Return carrier to left margin

Mode/Function Keys
(Used with Code Key)
NP Use to set Non-Print mode
1, 1-1/2, 2 Use to set line spacing
DENSITY Use to set density
AUTO Use to set automatic carrier return mode
L/L Use to set Line by Line mode
CTR Use to set Centering mode
RMF Use for Right Margin Flush mode

Paper Movement Keys
PAPER UP Insert and move paper up
PAPER DOWN Move paper down

1. INTR

2. COM

3. TYPI

4. CALI

5. MAIL

6. APPI

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1. INTRODUCTION

2. COMMUNICATIONS

Features

High quality printing——on most types of paper.

Compact, lightweight, and cordless——easy to carry and use anywhere.

Silent——thermal transfer printing system.

24x18 dot matrix printing——for clear, easy-to-read, and attractive documents.

15-character display——for error-free typing.

Calculator——calculation results can be easily inserted into sentences or tables.

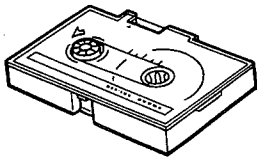
Special printing——bold, expanded, superscripts, subscripts.

Automatic functions——expert results with underlining, centering, right margin flush, carrier return.

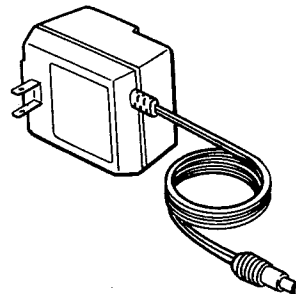
Owner's Checklist

The following items should be included with your **EP**.

•Cassette Ribbon (1)

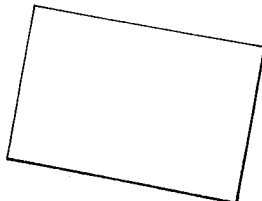


•AC Adaptor



•Plain Paper (10 sheets)
•Thermal Paper (10 sheets)

•Unpacking Instruction Sheet



•Warranty Card



Read this before unpacking the unit.

Cover

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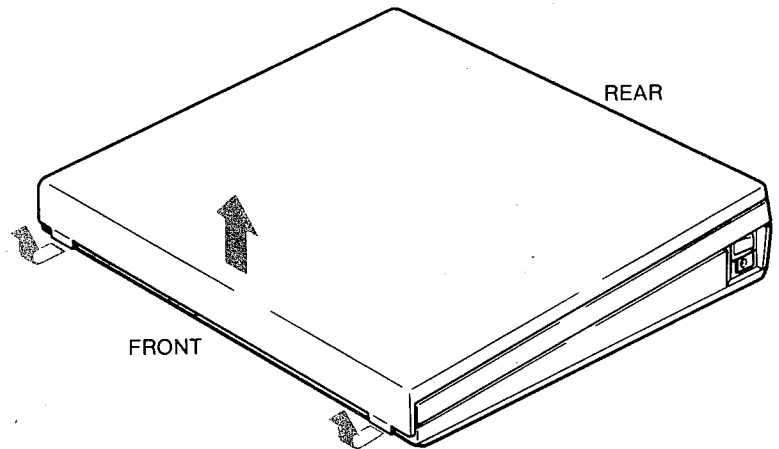
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2. COMMON OPERATIONS

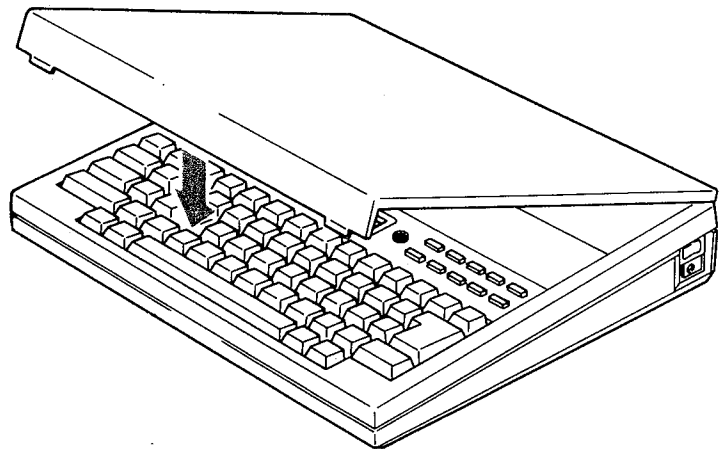
Common operations are those you would normally do before actually typing with the EP. This section explains the procedures common to all uses of your unit. Read and become familiar with these procedures before going on to the next sections.

Cover Removal/Replacement

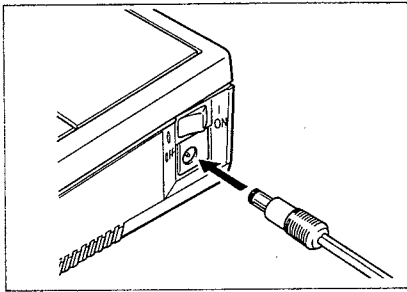
Place your **EP** down in front of you, with the handle on the bottom and toward you. Remove the cover by pulling the two tabs on the front. Then lift the cover up by the tabs. Do not attempt to remove the cover from the back, as the rear tabs may break if you do so. Remember to replace the cover when not using the unit.



When replacing the cover, be sure that the front is forward (indication on inside). Place it on the main unit from the rear, and then press down on the front of it until you hear the tabs click and lock.



AC Adaptor Connection

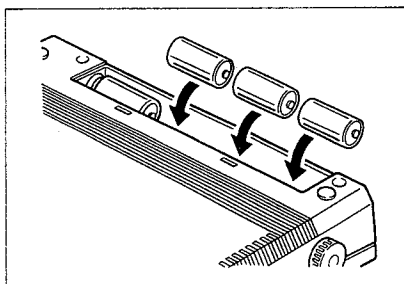
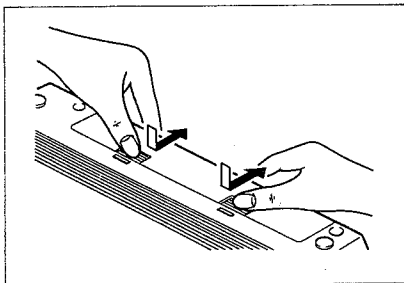
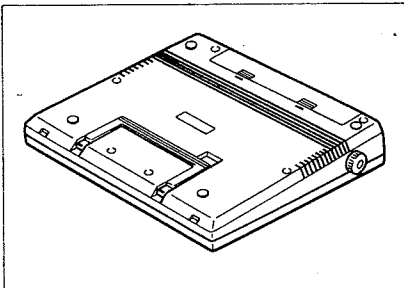


Do not use the adaptor with any other device and do not connect or disconnect it unless the **EP** Power Switch is OFF. Using your **EP** with anything other than the specified AC adaptor may damage it.

1. Make sure the Power Switch is OFF.
2. Insert the adaptor outlet plug into the jack provided on the unit, under the Power Switch.
3. Plug the adaptor into an AC outlet.
4. Turn the **EP** Power Switch ON.

Remember to disconnect the AC adaptor when not using your **EP** for extended periods.

Battery Installation



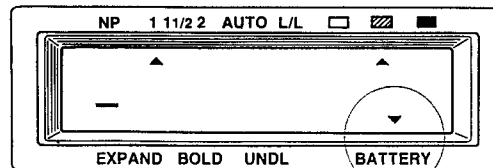
The **EP** operates on four C-size batteries.

1. After making sure that the Power Switch is OFF, place the unit as shown.
2. Release the battery compartment cover on the bottom of the unit by pressing the two tabs in the direction of the arrows, as indicated.
3. Continue pushing the cover to remove it.
4. Insert the batteries, making sure that all four are correctly aligned, as indicated by the marks in the battery compartment. Insert the battery on the left side first (the spring side).
5. Put the battery compartment cover in place and slide it in until the tabs click.

CAUTIONS: Replace all four batteries at the same time.
Use correctly rated batteries.
Remove the batteries if the unit is not to be used for an extended period.

WEAK BATTERY INDICATOR

Change the batteries immediately when the BATTERY indicator on the display illuminates.



Power

The **EP** Power Switch is in the OFF position.



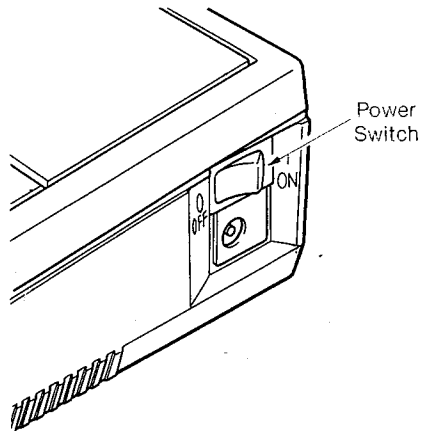
Display

The liquid crystal display (LCD) is used to change and control the display.

The BATTERY indicator (medium) is shown in bold (BC).

Power Switch

The **EP** Power Switch is located on the right side of the unit, near the rear. It should be in the OFF position when the unit is not being used.

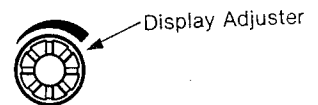
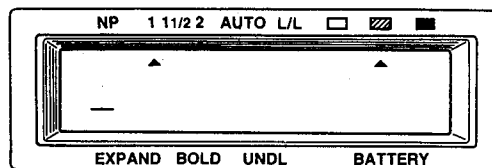



When you set the Power Switch to the ON position the ribbon carrier will automatically move to the left, then 10 spaces to the right. In addition, the following settings will be automatically programmed:

Left Margin	10 spaces
Right Margin	75 spaces
Tabs	10, 20, 30, 40, 50, 60, 70 spaces
Line Space	Single
Print Density	Medium
Print Mode	Normal

Display

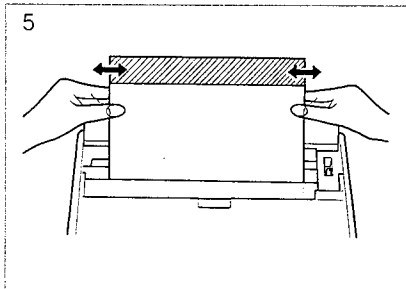
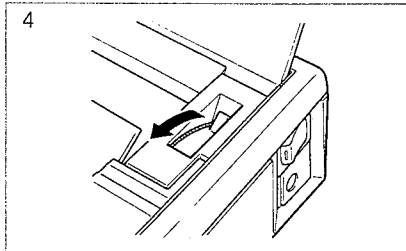
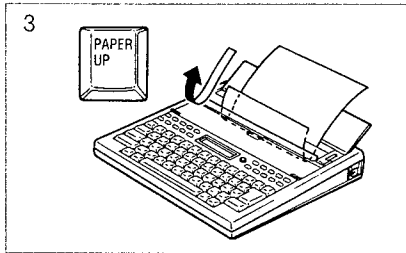
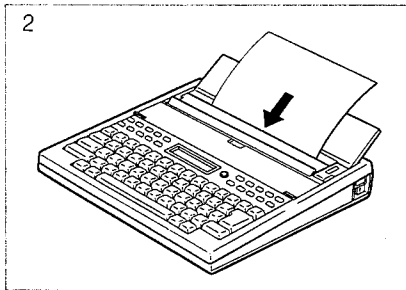
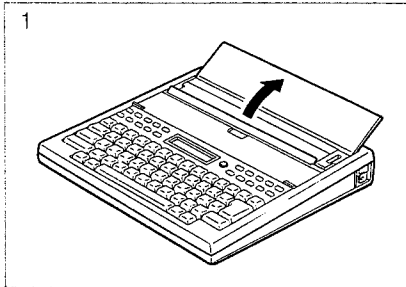
The liquid crystal display has a number of mode indicators, and shows a maximum of 15 characters during typing. If the display characters are hard to read, use the display adjuster to the right of the LCD to change the density of the characters. Turn the adjuster clockwise to produce strong, dark characters, and counterclockwise to produce light characters.



There are nine mode indicators, five along the top of the display, and four along the bottom. When an indicator is illuminated, that mode is ON. When the unit is first turned ON, the 1 (line space),  (medium density) and cursor will be indicated as shown above.

More than one indicator can be set at the same time. For example, if the underline (UNDL) and bold (BOLD) indicators are both illuminated, characters will be printed in bold face type and underlined.

Paper



Most types of smooth finish paper such as copy machine paper, may be used with the **EP**. Rag-content and other types of rough paper are not recommended.

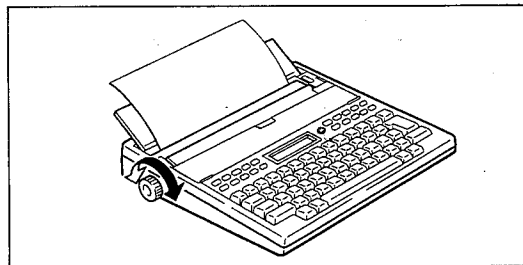
If you use thermal paper, remove the cassette ribbon before you start typing.

Remember that you cannot make carbon copies, so do not insert more than one sheet of paper at a time.

To insert paper your **EP** should be ON.

1. Lift up the paper holder.
2. Place a sheet of paper into the gap in front of the paper holder.
3. Hold down the **PAPER UP** key until the paper is fed through.
4. Pull the **PAPER RELEASE** lever forward.
5. Straighten and position the paper as required.
6. Push the **PAPER RELEASE** lever backward.
7. Hold down the **PAPER DOWN** key to position the paper at the starting location.

Steps 3 and 7 can also be performed by using the platen knob on the left side of your **EP**. It need not be ON if you use this method to insert the paper.

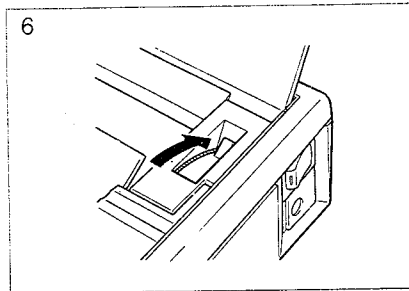


To remove paper from your **EP** use the **PAPER UP** key, **PAPER DOWN** key or the platen knob.

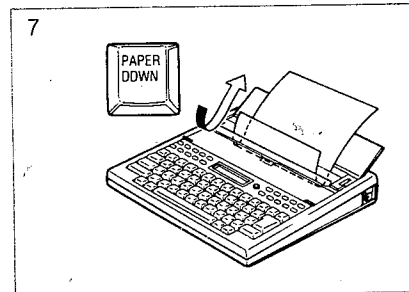
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If the paper you are typing on comes to an end, the display will flash the message "# PAPER EMPTY" and you will hear a "beep". To continue typing insert a new sheet of paper. Note that the paper holder will not close if the PAPER RELEASE lever is in the forward position.



■ Self Demonstration Print

A small demonstration program has been built in to the EP. To operate this program, insert a sheet of paper and then turn off the unit. Now hold down the CODE key and turn the EP ON. The display will show "# DEMO PRINT" and the following will be printed, illustrating the EP special functions. After printing has finished the modes return to the same settings as when the EP is first turned ON.

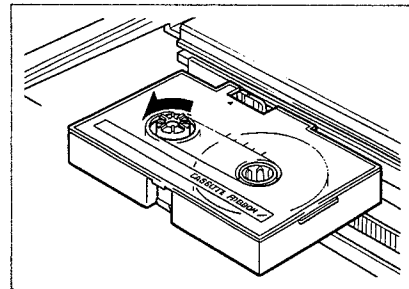
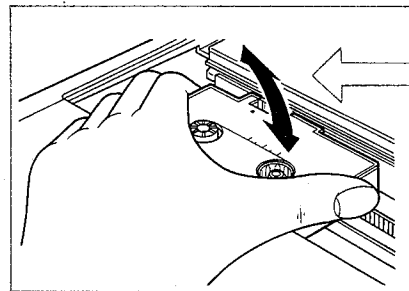
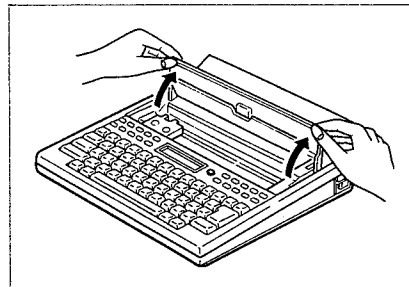
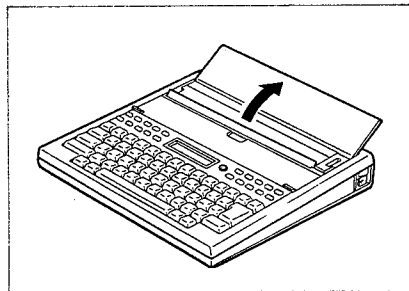
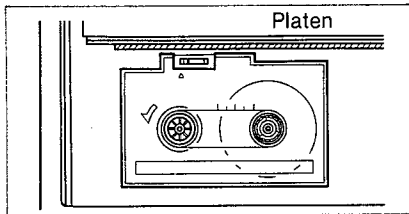
HELLO!

Some of the amazing features of this revolutionary machine include **BOLDFACE TYPING**, **Expanded Typing**, **EXPANDED BOLDFACE TYPING**, Automatic underlining.

Automatic Centering

RIGHT MARGIN FLUSH,
a built-in calculator (2×2=4), plus MUCH, MUCH MORE !!!

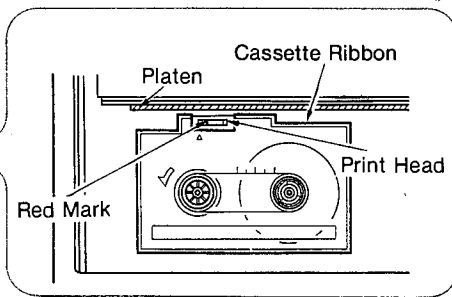
Cassette Ribbon Replacement



The EP uses Brother Model 6030 cassette ribbons. Each cassette can be used to type about 40,000 characters (about 32 double-spaced letter-size pages).

To change the cassette ribbon:

1. Make sure the Power Switch is OFF and the print head is released from the platen.
2. Lift up the paper holder.
3. Open the cassette cover by lifting it up with your thumbs.
4. Grasp the old cassette on both sides; lift up and out.
5. Place a new cassette ribbon on the carrier and press down on the center of the cassette. Make sure the ribbon is positioned between the platen and the print head.
6. Turn the cassette knob in the direction of the arrow (counterclockwise) to take up the ribbon slack.
7. Close the cassette cover and press down until both edge tabs click.



IMPORTANT: Be sure the ribbon is placed behind the print head as shown above.

CAUTION: Store extra cassettes in a cool, dry location.

This section is simple procedure. Note that the color...

■ Basic

When you have been typing. To print the first line in the NFD mode, the COD...

Dens



CODÉ I
Your EP hold down from  DENSIT

3. TYPING OPERATIONS

This section is divided into two parts. The Basic Operations Section explains the procedures used in simple typing of correspondence or notes. The Advanced Operations Section explains the procedures used in more complex typing, for example, term papers or quarterly reports. Read Section 2, Common Operations, before you attempt any of these procedures.

Note that the typing position is indicated by a red mark on the carrier print head. The column position can be located on the cassette cover scale.

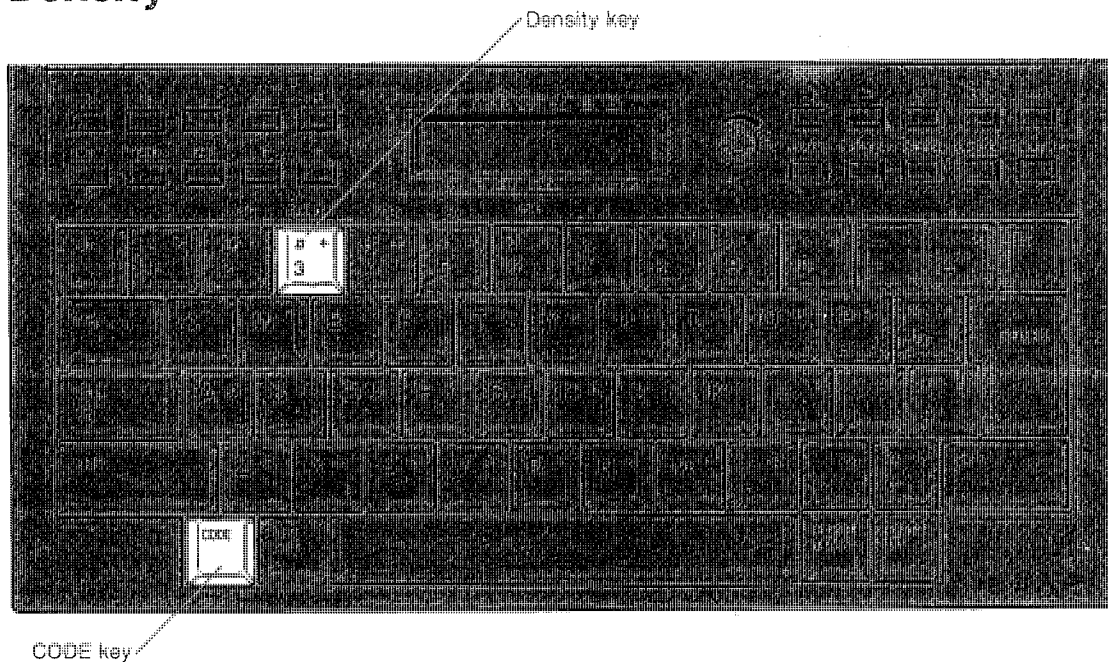
Basic Operations





When you begin typing, the characters will appear on the display. When more than 15 characters have been typed, they will go off the display to the left and be printed one by one.

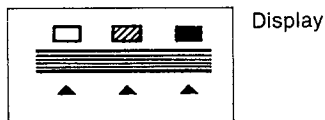
To print the characters remaining on the display when you finish typing, press the RETURN key.

In the NP mode, characters will appear on the display, but will not be printed. To enter the NP mode, press the CODE key and the NP key (the 1 key) simultaneously.

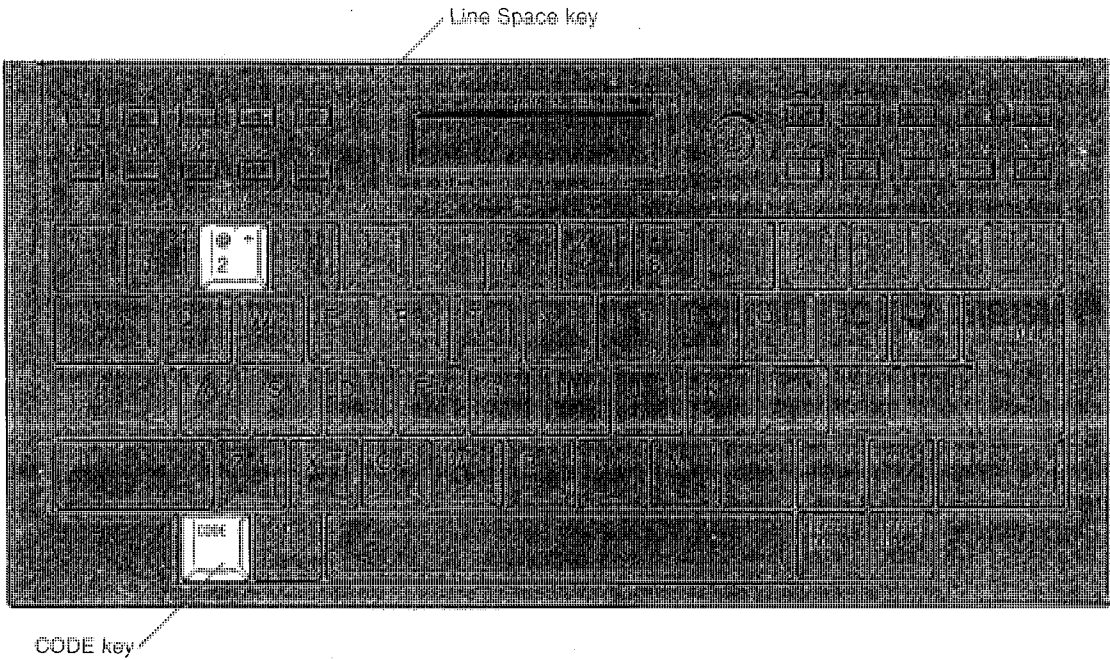
Density



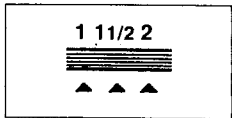
Your EP is automatically set to medium print density when it is first turned ON. To change the setting, hold down the CODE key and press the DENSITY key (the 3 key). The density setting will rotate from  (medium) to  (dark) to  (light) and then back to  each time both the CODE and DENSITY keys are pressed simultaneously.



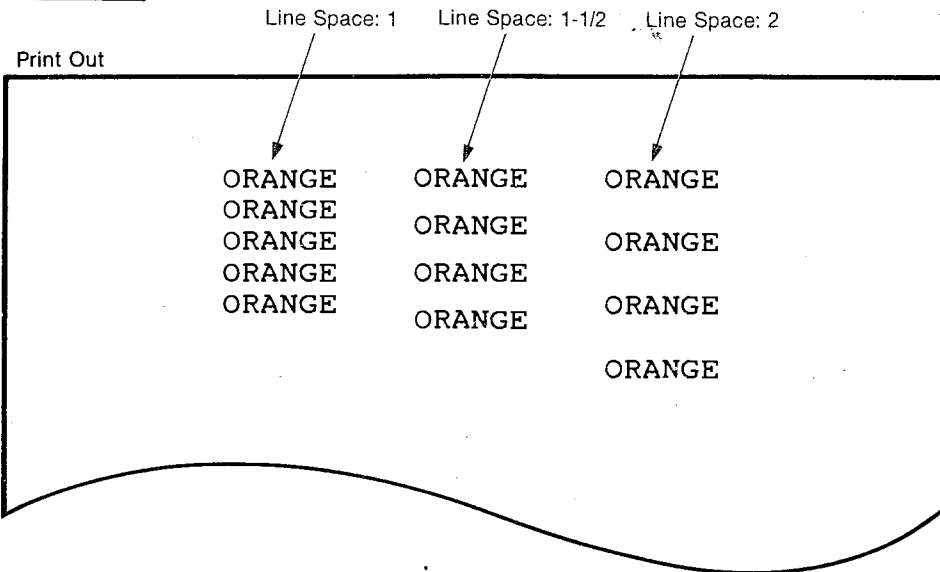
Line Spacing



Your EP is automatically set for single spacing when it is first turned ON. To change the setting hold down the CODE key and press the 1—1-1/2—2 key (the 2 key). Each time the CODE and 1—1-1/2—2 keys are pressed simultaneously the line space setting will rotate from 1 to 1-1/2 to 2 and then back to 1.



Display



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Margins
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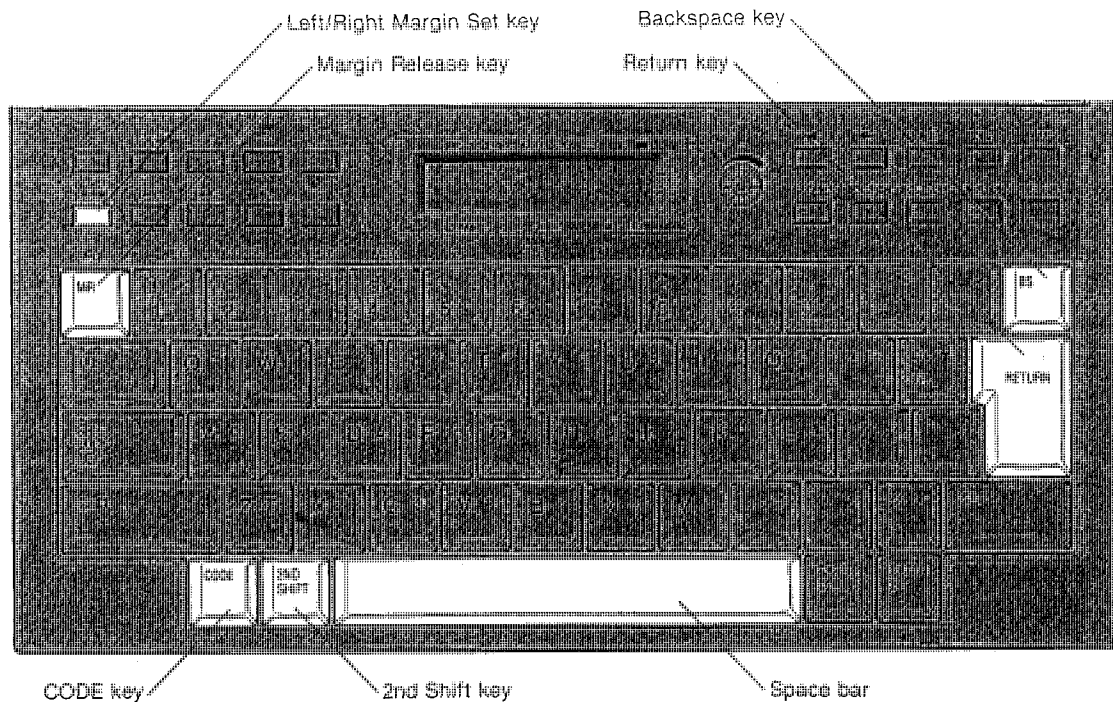
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Margins



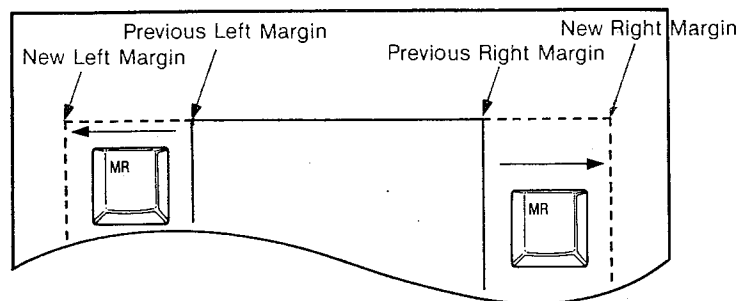
Margins are used when you do not want to print across the entire page. You can set the **EP** to start printing at a specific position, and stop printing at another. When the unit is first turned on, the left margin is set at the 10 column position, and the right margin at the 75 column position.

The left margin and right margin are easily set in any position on the page, but there must be a space of at least seven characters between them. Be sure the display is clear of characters before setting the margins.

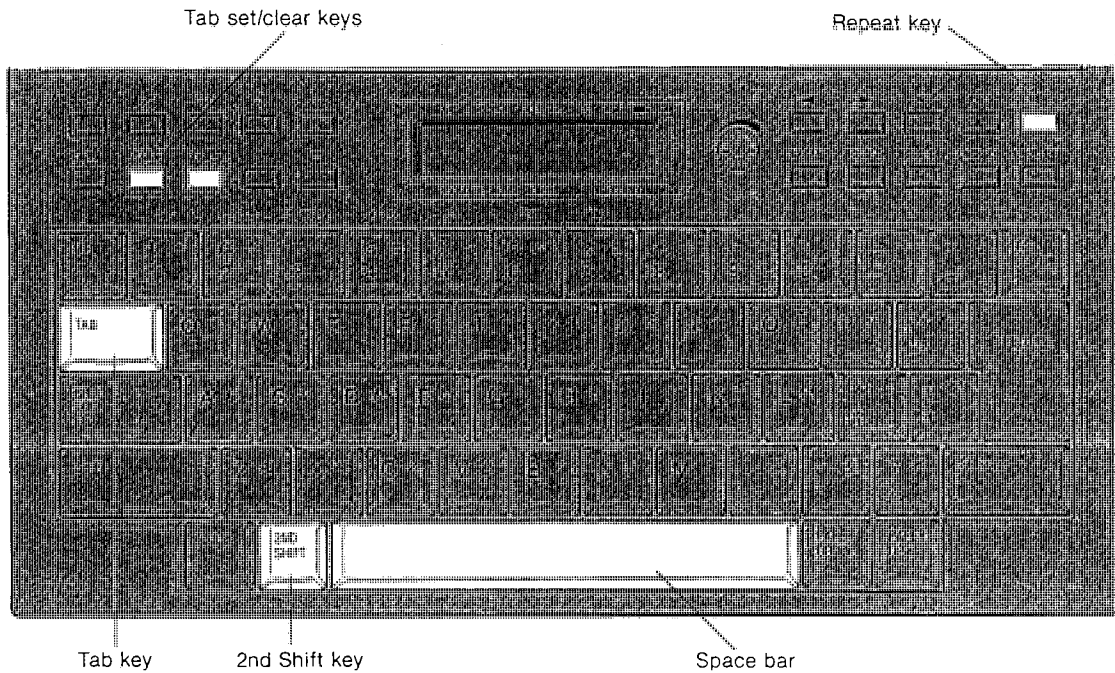
Set the left margin by moving the carrier red mark to the desired position; hold down the **2ND SHIFT** key and then use the **SPACE BAR** or **BS (backspace)** key. Once the carrier is at the correct position, press the **LM/RM** key. The left margin is now set and the carrier will return to this column position every time the **RETURN** key is pressed.

Set the right margin in the same way as the left margin, except that you must hold down the **CODE** key and then press the **LM/RM** key.

If a new margin is wider than an old margin, the carrier will stop at the previous margin position when setting the new margin. A "beep" will also sound. Release the old margin by pressing the **MR** key, then move the carrier to the desired position and set the new margin.



Tabs



Tabs are used when you want to print columns of information, or when you want to start printing between the margins. When the unit is first turned on, the tabs are set at 10, 20, 30, 40, 50, 60, and 70 column positions.

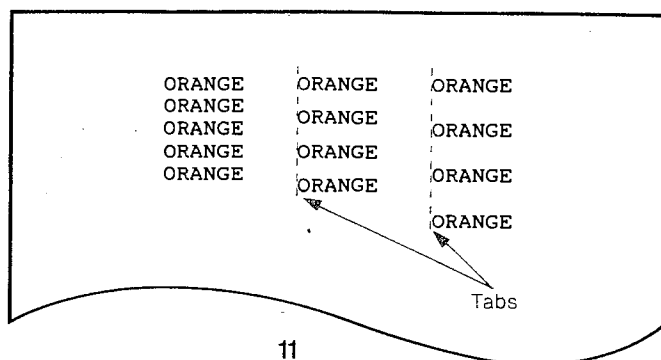
Several tab stops can be set on a line. There is no minimum spacing between tab stops, or between the margins and the tab stops. Be sure the display is clear of characters before setting the tabs.

To set a tab stop, move the carrier red mark to the desired position, using the **2ND SHIFT** key and the **SPACE BAR** or **BS** key. Once the carrier is at the correct position press the **TAB+** key. A tab stop is now set at that column position. Move the carrier and press the **TAB+** key for each tab stop desired.

To move to a tab stop, simply press the **TAB** key. The carrier will move to the next tab stop to the right of the carrier.

To clear a tab stop use the **RETURN** key and then the **TAB** key to position the carrier at the stop to be removed. Then press the **TAB-** key. That tab stop will now be canceled.

To clear all the tab stops press the **TAB-** key and press the **REP** key.



The back

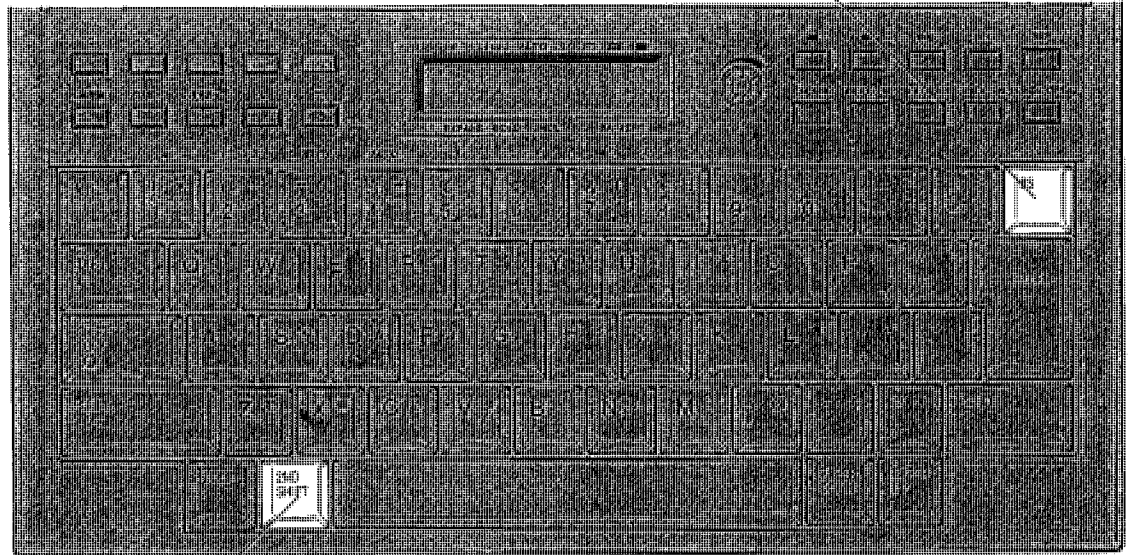
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Backspace

Backspace key



2nd Shift key

The backspace key can be used to make deletions on the display before a letter is printed.

Pressing the BS key will cause the letter to the left of the cursor to be deleted. The carrier will not move.

If you wish to move the carrier to the left (to set a new left margin, for example), press the 2ND SHIFT key and BS key simultaneously.

Examples

Left and Right Margin Settings
Used to space text away from the paper edge.

Dear Bill,

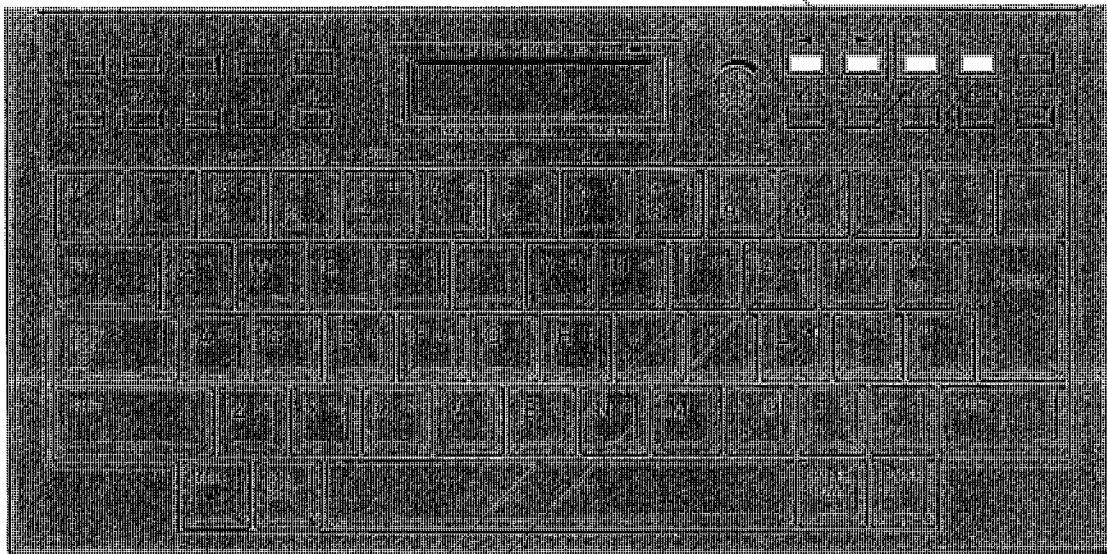
Here is the list you asked for. I hope it helps with the new membership drive. If there is anything else you need from the membership files call me at home.

NAME	PRESENT STATUS	EXPIRATION
Emily Smith	Contributor	February, 1986
Pat Moe	Student	December, 1984
Bobby Clarke	Life	(none)
C.F. Brown	Student	June, 1985
John E. Sez	Participant	July, 1984

Tab Stop Settings
Used to align the first character in columns.

Corrections

Cursor movement keys



Insert key Delete key

Insertion

To insert a character, press the **II** key in the character position where you want the character inserted. The character will be inserted at that position.

ORAN

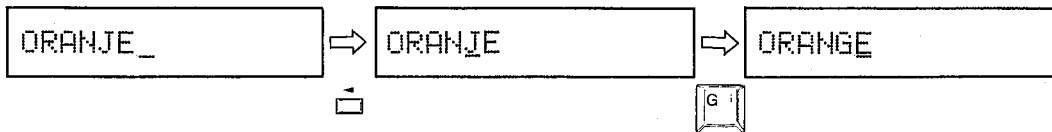
ORAN

You can correct, delete, and insert characters on the display before you print out the text. Use the cursor controls to position the cursor where you wish to make a correction. Before you print the text from the display memory move the cursor as far to the right as it will go. You will hear a beep when you reach the end.

IMPORTANT: When moving the cursor off the display to the right, use only the cursor key, NOT the SPACE BAR, etc.

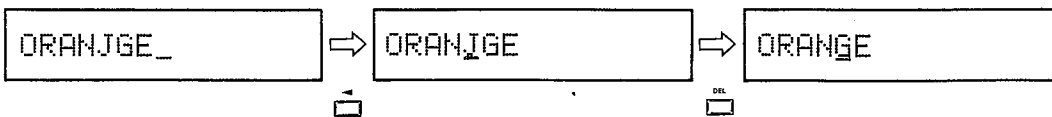
Substitution

To change a character, move the cursor under the specific character and then type in the new character. Then move the cursor to the right until the beep is heard.



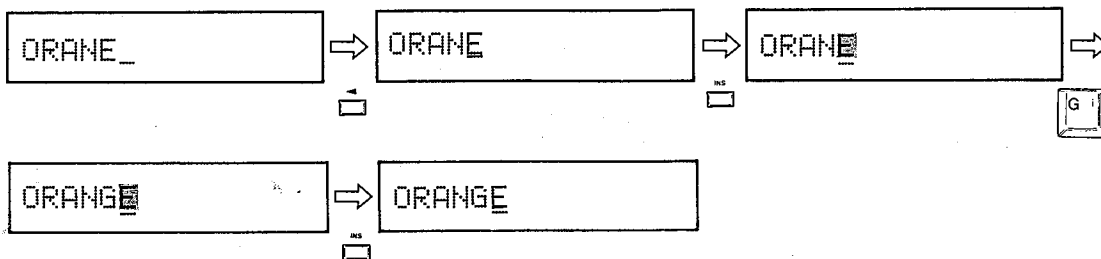
Deletion

To delete a character, move the cursor under the character to be deleted. Then press the DEL key. The character above the cursor will be deleted, and the remaining text will move to the left. Then move the cursor to the right until the beep is heard.



Insertion

To insert a character, move the cursor to the position where the character is to be inserted. Then press the **INS** key. The character above the cursor will flash, indicating you are in the insert mode. Type in the character, and it will be inserted to the left of the character above the cursor. Characters can be inserted until the right margin is reached. Press the **INS** key again and the insert mode will be canceled. The character above the cursor will stop flashing. Then move the cursor to the right until the beep is heard.



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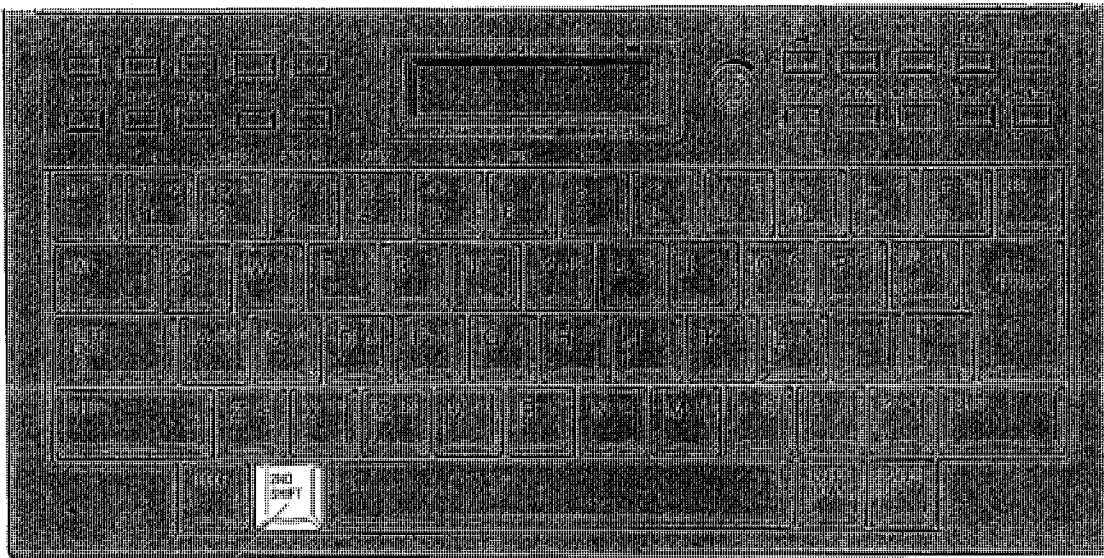
new



DEL
Then



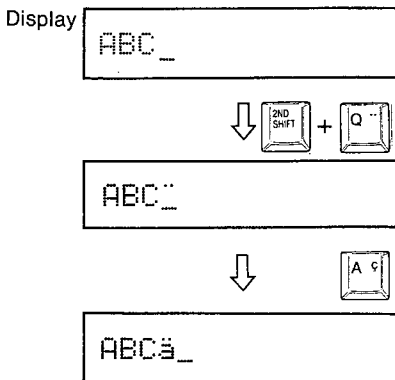
Special Characters/Symbols Accents



2nd Shift key

There are many special characters, symbols, and accents on the keyboard, most of them shown as such in the upper right hand corner of the keys. To type the characters and symbols, hold down the 2ND SHIFT key and then press the desired special character key.

The accent keys can only be used with certain letters. Hold down the 2ND SHIFT key and press the accent key—the accent will be displayed. Then press the desired letter and it will be displayed under the accent. The accents ^, ˇ, ¨, and ˆ can be used with A, E, I, O, U, a, e, i, o, and u. The accent ~ can be used with A, N, O, a, n, and o.



Print Out

¨	Ä	Ë	Ï	Ö	Ü	ä	ë	ï	ö	ü
ˇ	Á	É	Í	Ó	Ú	á	é	í	ó	ú
˘	À	È	Ì	Ò	Ù	à	è	ì	ò	ù
ˆ	Â	Ê	Î	Ô	Û	â	ê	î	ô	û
˜	Ã	Ñ	Õ			ã	ñ	õ		

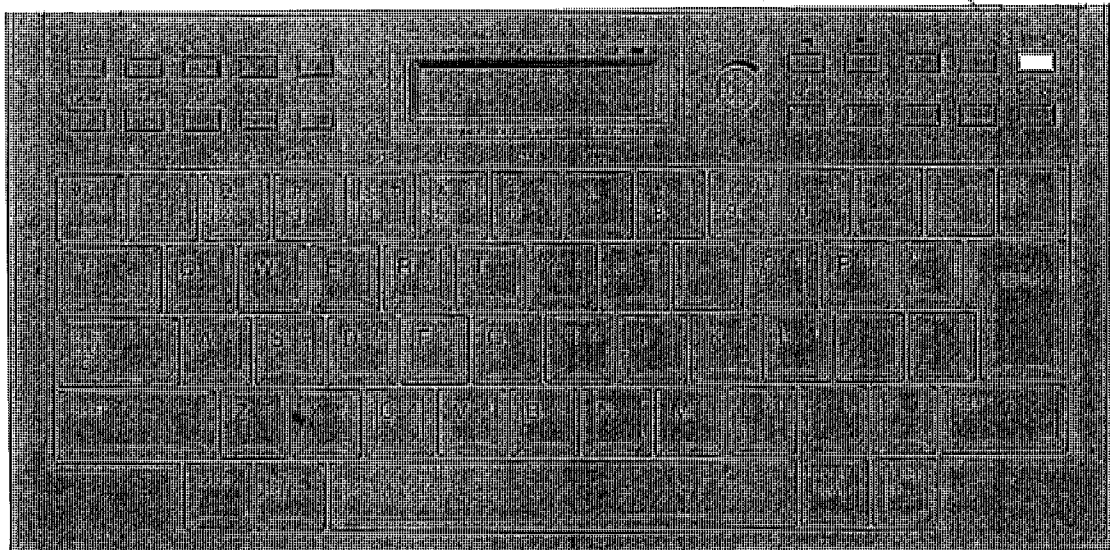


To repeat :

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Repeat

Repeat key



as such
ID

To repeat a character or function, press the REP key after pressing that character or function key down.

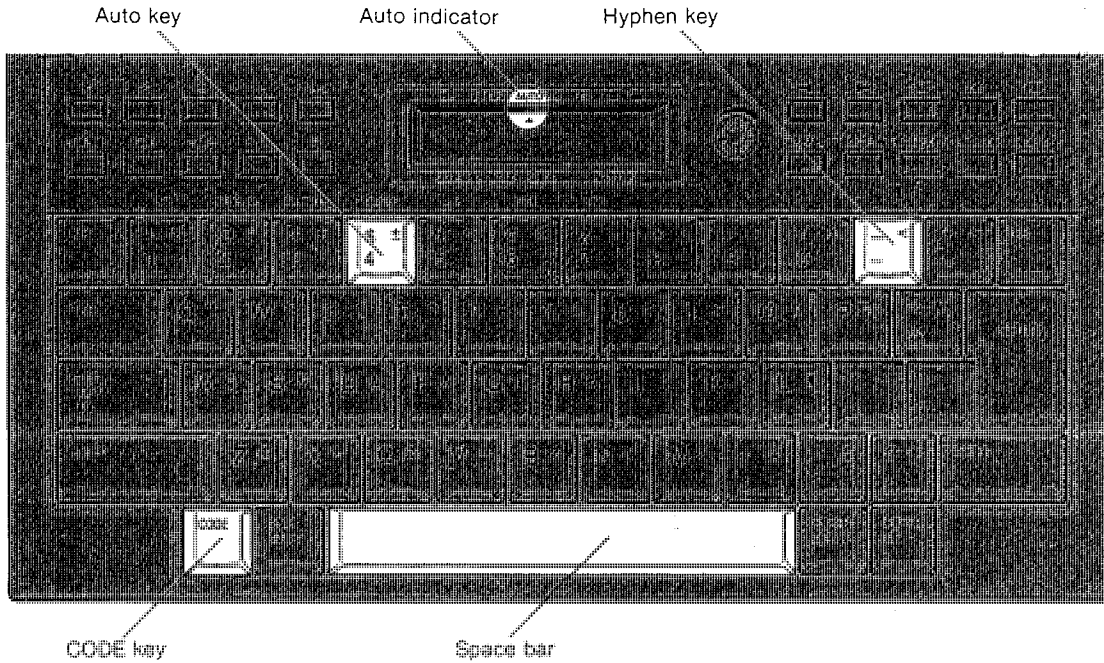
press
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Certain keys will repeat automatically if they are held down. These keys are: DEL (delete), ◀ (cursor left), ▶ (cursor right), TAB (tabulator), BS (backspace), SPACE BAR, PAPER UP, PAPER DOWN, RETURN, permanent space (CODE + SPACE BAR), 2ND SHIFT + SPACE BAR, and 2ND SHIFT + BS.

ï	ö	ü
í	ó	ú
î	ô	û
ï	ö	ü
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Advanced Operations

Automatic Return



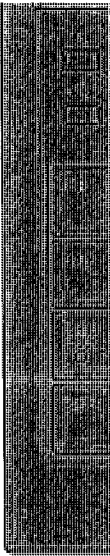
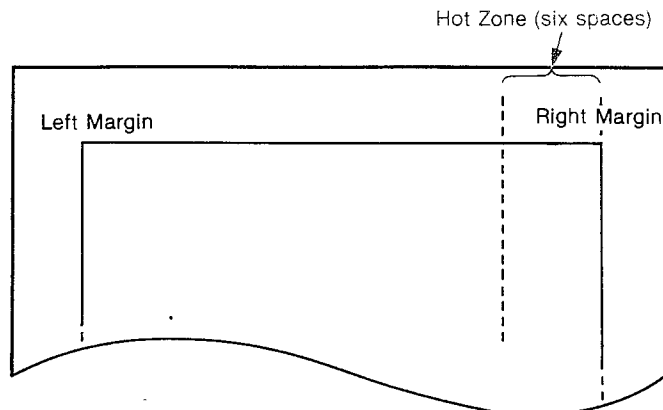
When the Automatic Carrier Return function is in operation your **EP** will automatically perform a carrier return and line feed from within the "Hot Zone", which is the area between the margin warning "beep" and the right margin (six spaces). This automatic return to the left margin will happen whenever a space or hyphen is typed in the "Hot Zone". When you reach the end of the line, Press the **RETURN** key. Automatic carrier returns are not performed when you are using the Centering function or the Right Margin Flush function.

To set the unit to perform automatic carrier returns, hold down the **CODE** key and press the **AUTO** key (the 4 key). The **AUTO** indicator will light up.

To cancel automatic carrier returns, hold down the **CODE** key and press the **AUTO** key again. The **AUTO** indicator will go out.

Permanent Space/Hyphen

If you do not want an automatic carrier return on a particular line, use the Permanent Space (**CODE**+ **SPACE BAR**) or Permanent Hyphen (**CODE** + **[-]**) functions within the "Hot Zone".

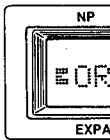


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To :

Display

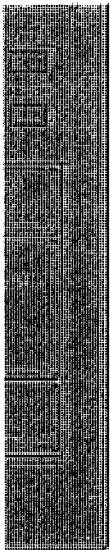


Print Out

will indicate keyed in

will indicate has been

Bold Characters



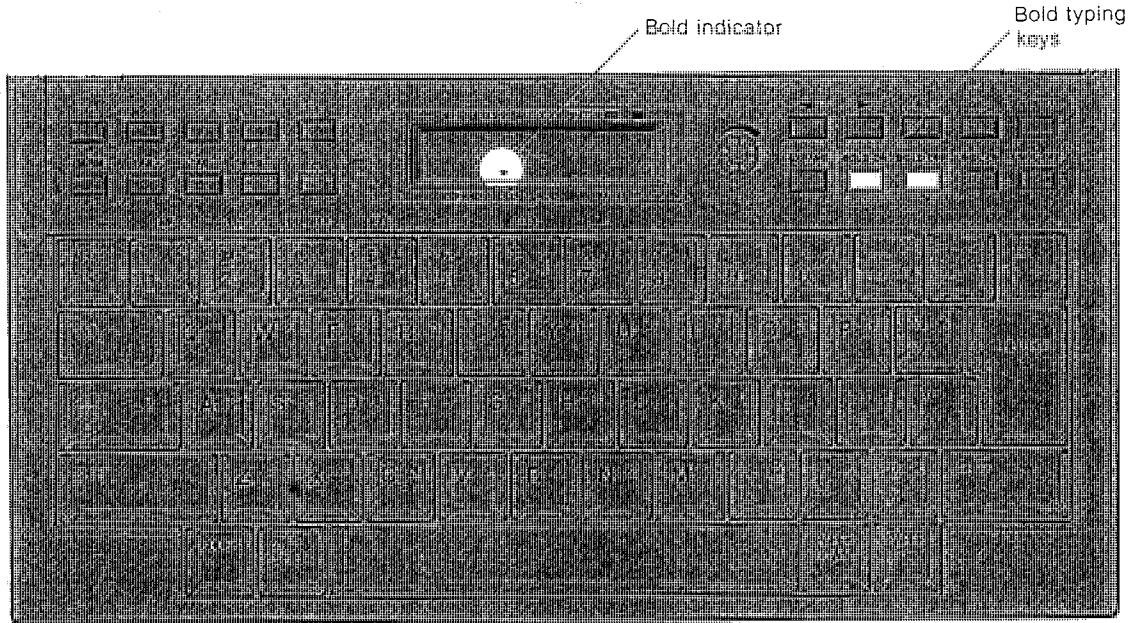
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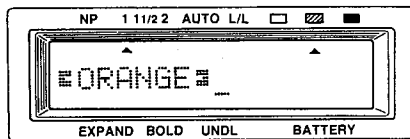


When the Bold Character function is in operation the characters typed in will automatically be printed in bold-face.

To print bold characters, press the **BOLD ON** key before you type in the characters you want in bold face. The **BOLD** indicator will illuminate on the display. Every character typed in when the **BOLD** indicator is illuminated will be printed in bold face.

To stop bold-printing, press the **BOLD OFF** key. The **BOLD** indicator will go out.

Display

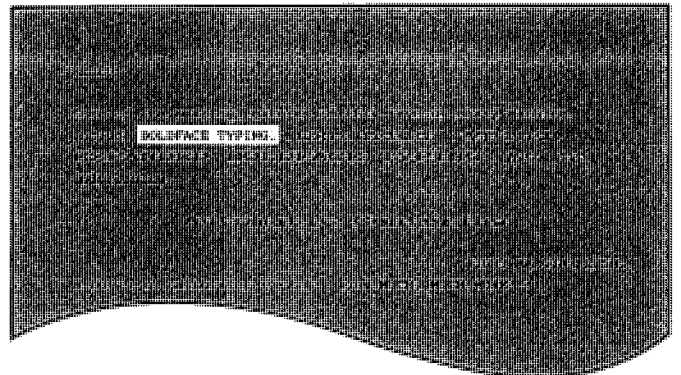


Print Out

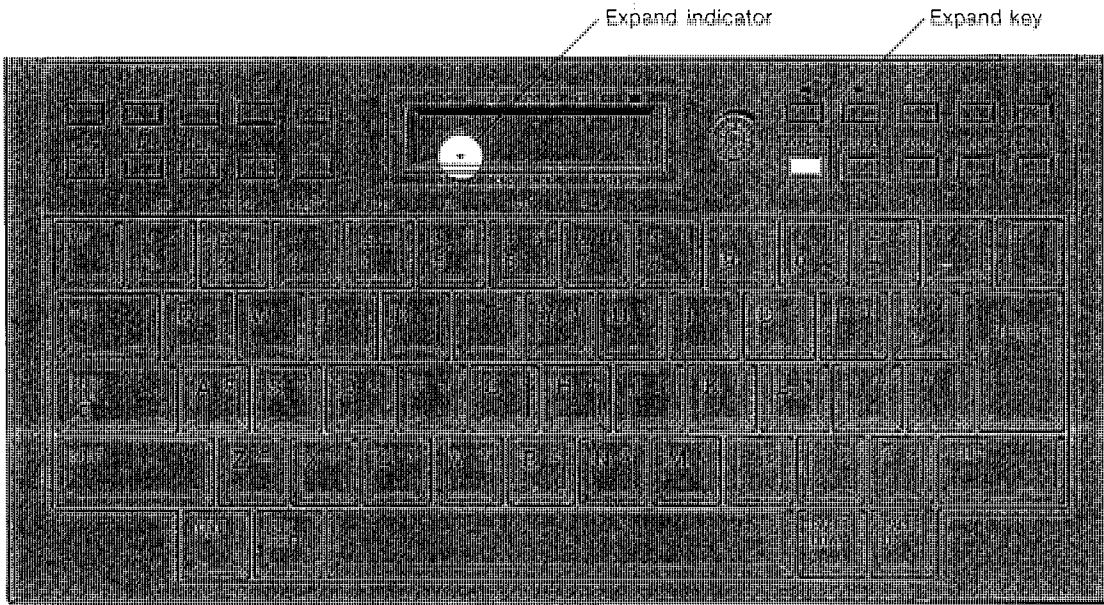
ORANGE

■ will show on the display to indicate that all characters now keyed in will be in boldface.

■ will show on the display to indicate that the boldface mode has been released.



Expanded Characters

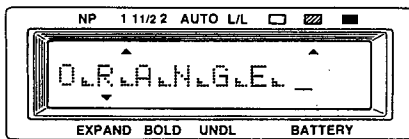


When the Expanded Character function is in operation the characters typed in will automatically be printed double-width.

To print expanded characters, press the **EXPAND** key before you type in the characters you want expanded. The **EXPAND** indicator will illuminate. Every character typed in when the **EXPAND** indicator is illuminated will be printed double-width.

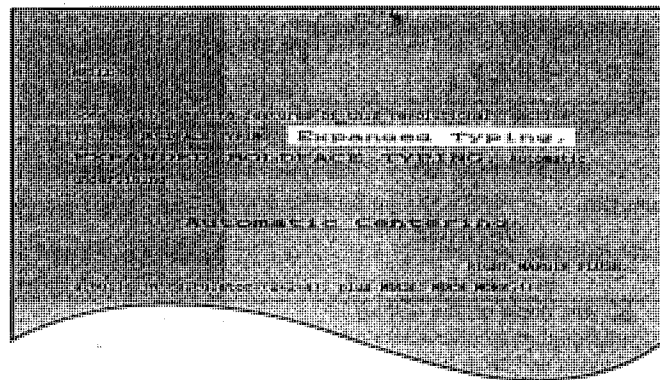
To stop printing expanded characters press the **EXPAND** key again. The **EXPAND** indicator will go out.

Display



Print Out

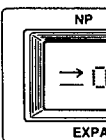
ORANGE



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Print Out

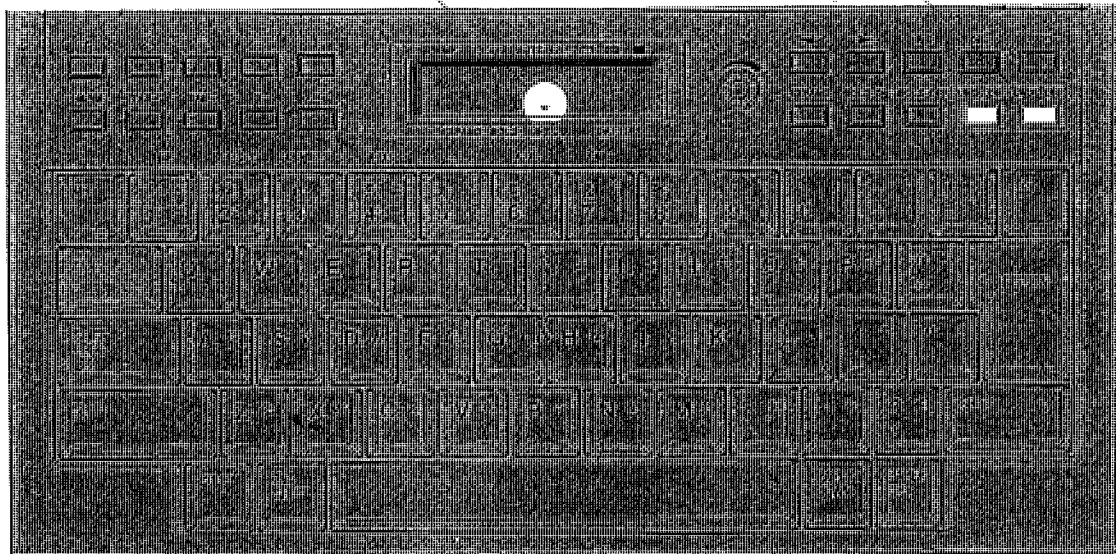
=> indica are printed underline.

=< indica are with ar

Automatic Underlining

Underline indicator

Automatic Underline control keys

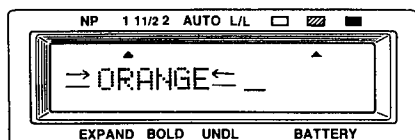


When the Automatic Underlining function is in operation the characters typed in will be automatically underlined when printed.

To print underlined characters, press the **UNDL ON** key before you type in the characters you want underlined. The **UNDL** indicator will illuminate. Every character typed in when the **UNDL** indicator is illuminated will be underlined when printed.

To stop underlining, press the **UNDL OFF** key. The **UNDL** indicator will go out.

Display

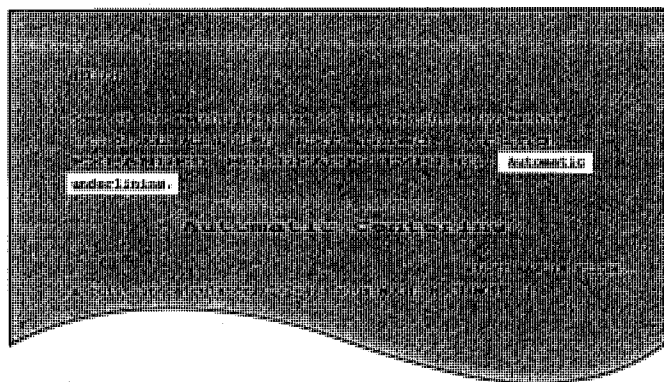


Print Out

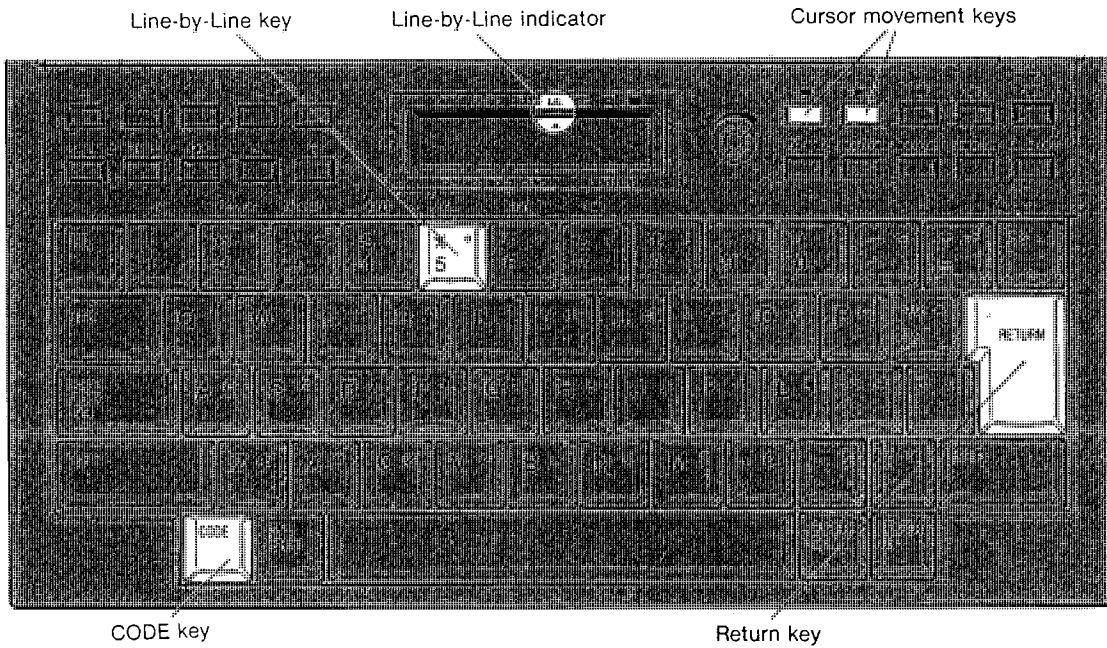
ORANGE

⇒ indicates characters to the right are printed with an automatic underline.

⇐ indicates characters to the left are with an automatic underline.



Line-by-Line Printing



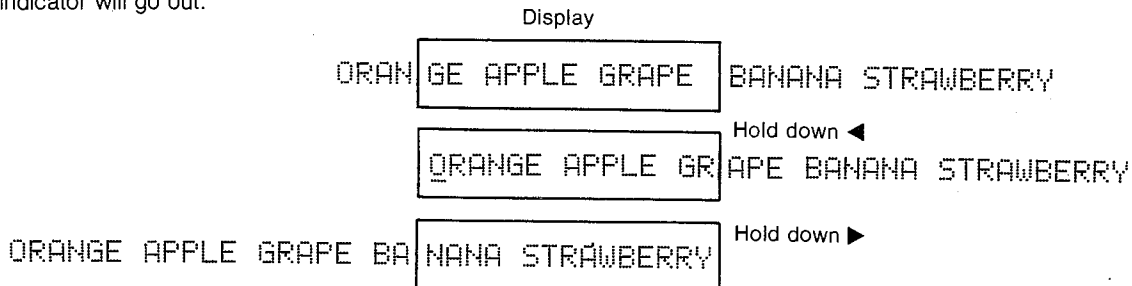
When the Line-by-Line function is in operation, the unit will not print until you press the **RETURN** key. This function allows you to make corrections on the entire line before it is printed. See the Corrections Sections for these operations.

To use the Line-by-Line function hold down the **CODE** key and press the **L/L** key (the 5 key). The L/L indicator will light up. Type in the desired text, make revisions, and then press the **RETURN** key. The text will be printed from the display memory. In the Automatic Return mode, revisions can be made before a space or hyphen is pressed in the Hot Zone.

Use the **▶** key to move the cursor to the right on the display. When it reaches the far right it will disappear and the "beep" will sound.

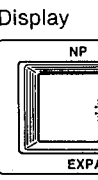
Use the **◀** key to move the cursor to the left on the display. When it reaches the far left, the characters remaining in the memory will start to move to the right across the display, with new characters appearing in the left-most position of the display. When the last (far left) character is reached, the "beep" will sound.

To cancel the Line-by-Line function hold down the **CODE** key and press the **L/L** key again. The L/L indicator will go out.



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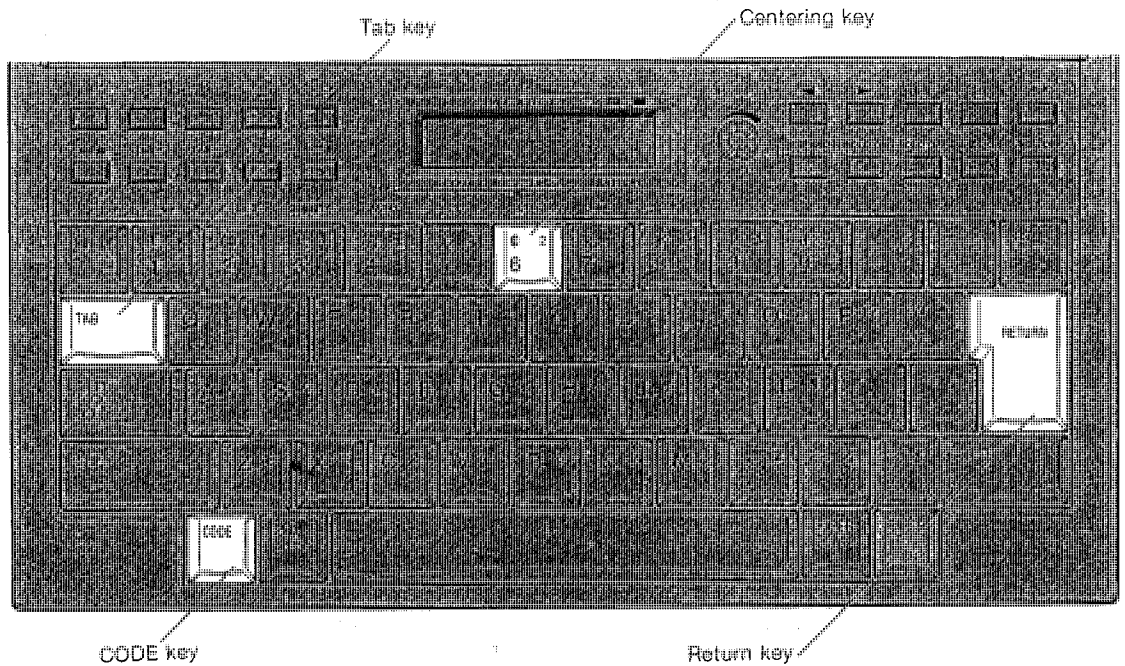
To c
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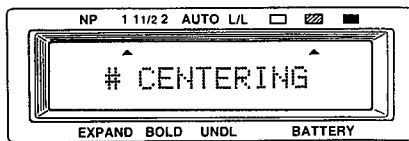
Automatic Centering



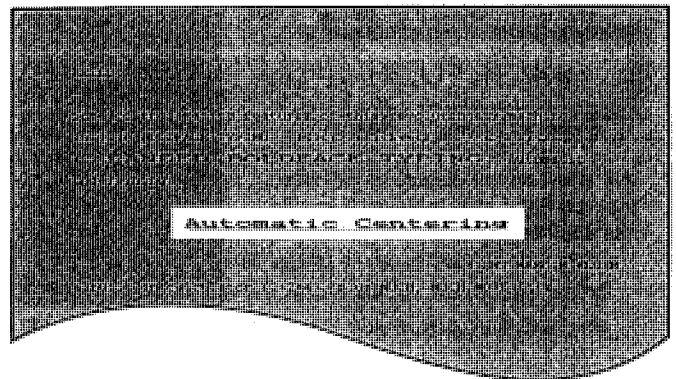
The Centering function allows you to center text automatically between the left and right margins. This function can be entered only when the carrier is at the left margin.

To center text, return the carrier to the left margin, using the RETURN key. Then hold down the CODE key and press the CTR key (the 6 key). The LCD will display the message "# CENTERING". Now type in the desired text. If the text is longer than 15 characters it will be stored in the display memory.

Display

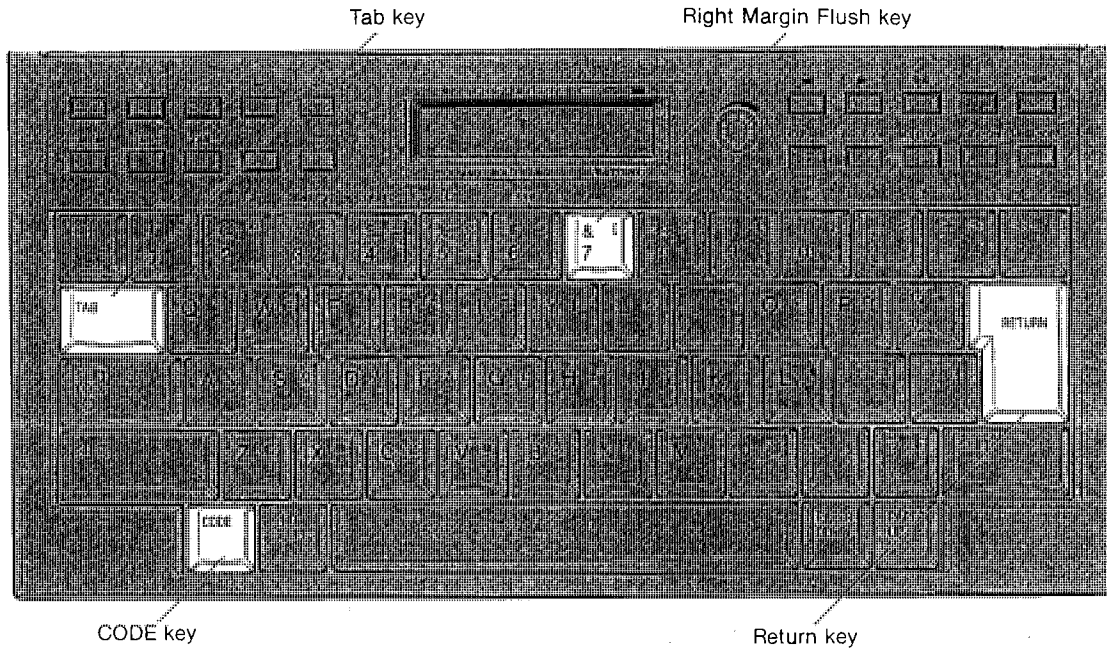


will show on the display to indicate that the Automatic Centering Function has been engaged.



To edit the text, see the Corrections Section. Once the text is ready, simply press the RETURN key or the TAB key and it will be printed, centered between the left and right margins. The Centering function will also be canceled.

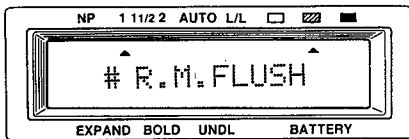
Right Margin Flush



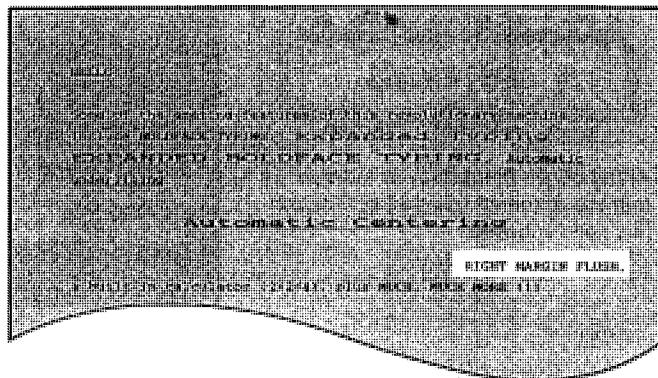
The Right Margin Flush function allows text to be printed aligned against the right margin. This function can be entered from any carrier position, except one to the right of the right margin. It is especially useful for lining up dates, etc., along the right margin.

To print text aligned against the right margin, hold down the **CODE** key and press the **RMF** key (the 7 key). The LCD will display the message "# R.M. FLUSH". Now type in the desired text. If the text is longer than 15 characters it will be stored in the display memory.

Display

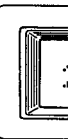


will show on the display to indicate that the Right Margin Flush Function has been engaged.



To print key before character typing line then on

Display

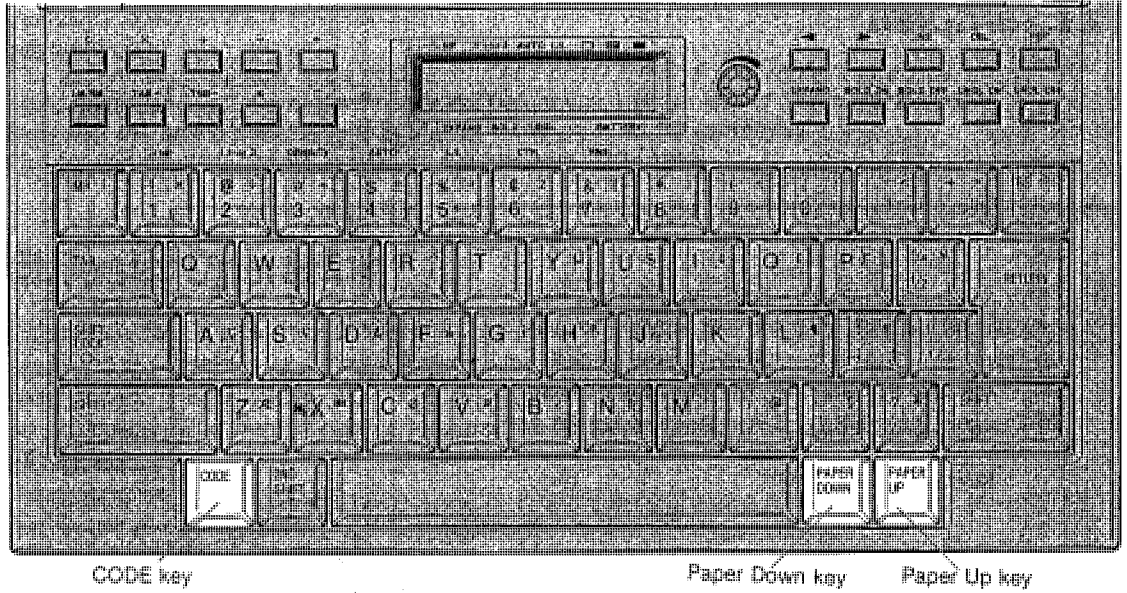


To print before y hold do line. The half line



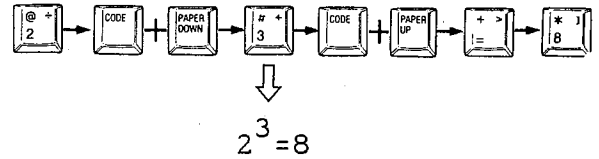
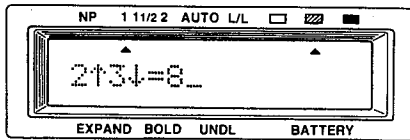
To edit the text see the Corrections Section. Once the text is ready, simply press the **RETURN** key or the **TAB** key and it will be printed flush with the right margin. The Right Margin Flush function will also be canceled.

Superscripts/Subscripts

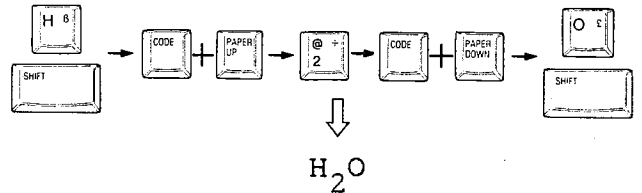
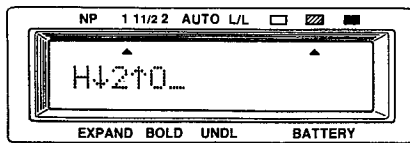


To print Superscripts (for example, the "3" in 2³), hold down the CODE key and press the PAPER DOWN key before you type in the superscript characters. When you have finished typing in the superscript characters hold down the CODE key and press the PAPER UP key. This will return you to the regular typing line. The paper will automatically move one half line down before the superscript characters, and then one half line up after printing them, regardless of the line space setting.

Display



To print Subscripts (for example, the "2" in H₂O), hold down the CODE key and press the PAPER UP key before you type in the subscript characters. When you have finished typing in the subscript characters hold down the CODE key and press the PAPER DOWN key. This will return you to the regular typing line. The paper will automatically move one half line up before the subscript characters, and then one half line down after printing them, regardless of the line space setting.

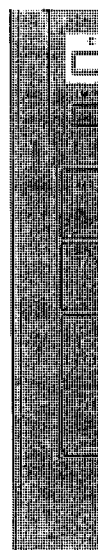


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Right Margin Flush
Text is automatically printed flush with the right margin.

January 13, 1985

Mr. Ed Flipper
39 Center Street
New York, NY 10001

Centering
Text is printed midway between the right and left margins.

Dear Mr. Flipper,
The following is an estimate for the landscape work.

PATIO

Lumber.....	\$900
Tile.....	450
Concrete.....	220
Brick.....	310

Underlining
Characters are automatically underlined.

SUB TOTAL..... \$1880

BACKYARD

Sod..... \$1200

TOTAL..... \$3080

Bold
Characters are printed in bold face.

Expanded
Characters are expanded to twice normal width.

We hope you will find this satisfactory, and we expect to hear from you soon.

4. CALCULATOR OPERATIONS

Calculator operations are those procedures which allow you to use your **EP** as an electronic calculator.

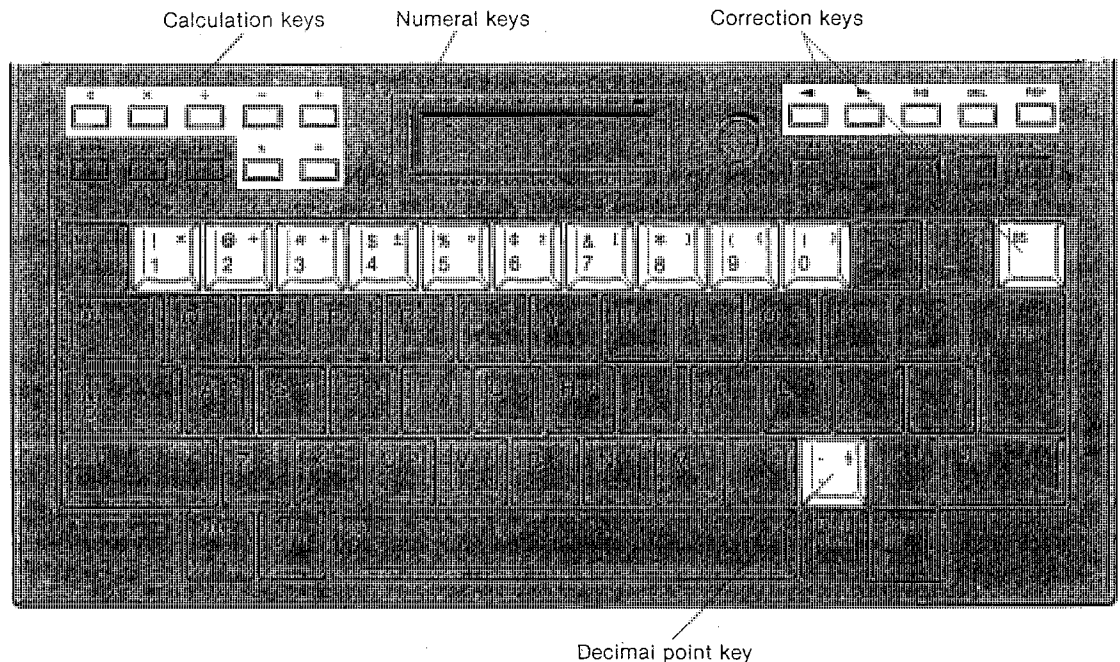
This section explains how to do calculations and insert them, or their results, into your typewritten work. Read Section 2, Common Operations, before you attempt any of these procedures.

Note that the typing position is indicated by a red mark on the print head.

The column position can be located on the cassette cover scale.

■ Basic Operation

Calculations can be performed in normal or non-print (NP) modes. The results of calculations will be expressed in a maximum of 10 digits, including the decimal point. Only the numerals (0—9), decimal point (period), arithmetic keys (+, -, x, ÷, =, %), and **C** (clear) key, will operate when your **EP** is used as a calculator. To correct calculation input use the **BS** (backspace), cursor, **INS** (insert), and/or **DEL** (delete) keys.



In normal operation, the calculation without the result will be printed as soon as you press the = key. To print the result press the = key again. This will not clear the display. To print the result and clear the display press the **C** key.

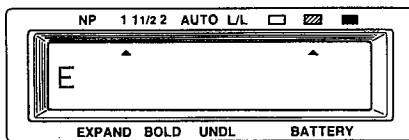
In NP mode, the calculation will not be automatically printed. The result will appear on the display as soon as you press the = key. To clear the display, simply press the **C** key.

If you want to print only the result in a sentence or table, switch to NP mode for the calculation. After the result appears on the display, use the cursor and **DEL** keys to erase the equal symbol. Then return to normal mode and press the **C** key or = key to print the result only.

Display Indication

An "E" appearing on the display indicates one of the following conditions:

Display



- An input number exceeded 10 digits.
- The answer exceeded 10 digits.
- A number was divided by 0.

Press the C key to erase the "E".

Flashing numbers in the calculation result indicate that the result has gone over the right margin, and the flashing digits cannot be printed on that line. Use one of the following methods to print the result:

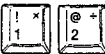
- If the flashing numbers are not necessary——use the cursor keys and the DEL key to erase the flashing digits. Then press the = or C key to print the result.
- To print the flashing digits beyond the margin——press the MR key and the flashing will stop. Press the RETURN key to print the result.
- To print the flashing digits on the next line——press the RETURN key to print the non-flashing digits. Then press the = or C key to print the flashing digits on the next line.
- To print the entire result on the next line——use the cursor keys and the DEL key to erase the display, then press the RETURN key to start the next line. Now press the = key and the result re-appears on the display. Press the = or C key to print the result.

Examples

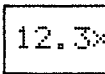
- Calculations are performed in the order in which the numbers and operations are input, regardless of parentheses, letters or other symbols. For example, $(3p + 4p) \times 2$ and $(3 + 4) \times 2$ will both equal 14 while $2 \times (3 + 4)$ will equal 10.
- If more than one operation key is input, the first operation will be performed. For example, $123 \times + 22$ will be treated as 123×22 and the result will be 2706.
- If a number is followed by an operation and then by an =, the input number will be operated upon twice. For example, $123 \times =$ will result in 15129 or 123×123 .

Calculat

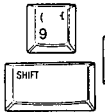
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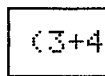
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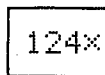
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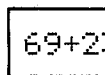
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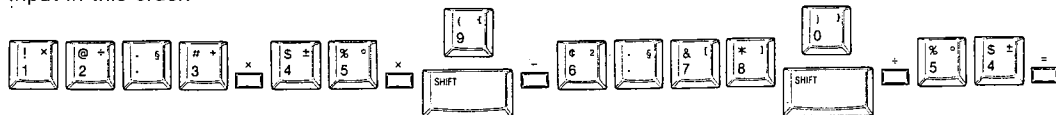


Calculator Examples

Multiplication and Division

To make this calculation: $12.3 \times 45 \times (-6.78) \div 54 = -69.495$

Input in this order:



The display will look like:

12.3x45x(-6.78)

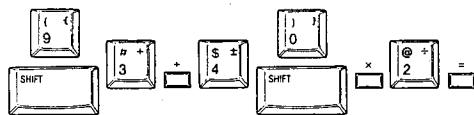
3x45x(-6.78)÷54

=-69.495

Mixed Calculations

To make this calculation: $2 \times (3 + 4) = 14$

Input in this order:



The display will look like:

(3+4)x2

=14

Percentage has the formula $A \times B/100$

To make this calculation: $124 \times (19/100) = 23.56$

Input in this order:



The display will look like:

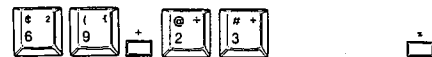
124x19

%=23.56

Premium has the formula $A \times (1 + B/100)$

To make this calculation: $69 \times (1 + 23/100) = 84.87$

Input in this order:



The display will look like:

69+23

%=84.87

5. M

Discount has the formula $A \times (1 - B/100)$
 Input in this order:

To make this calculation: $261 \times (1 - 83/100) = 44.37$



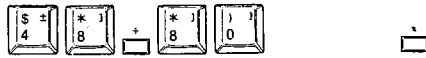
The display will look like:

261-83_

%=44.37 _

Ratio (percentage) has the formula $A/B \times 100$
 Input in this order:

To make this calculation: $48/80 \times 100 = 60$



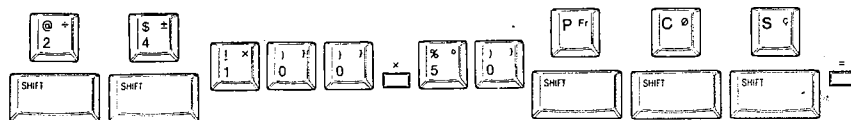
The display will look like:

48÷80_

%=60 _

Inserting characters and symbols
 Input in this order:

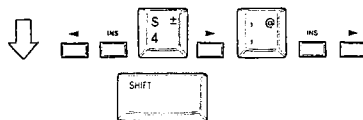
To obtain this output: $@\$100 \times 50 \text{ PCS} = 5000 \rightarrow \$5,000$



The display will look like:

@\$100x50PCS_

=5000 _



=\$5,000 _

Preca

- Do not use a soft

- Do not

- Do not use the

- Do not use the

- Always

- If you have a battery

Preca

- Observe
- Clean
- Check for damage
- Change

If a problem occurs, contact your dealer.

5. MAINTENANCE

Precautions

- Do not clean your **EP** with alcohol, thinner, or other organic solvents. Use only a soft, dry cloth.
- Do not drop foreign objects into your **EP**.
- Do not expose your **EP** to high temperatures or high humidity. Never leave it on the dashboard or in the trunk of your car.
- Do not use your **EP** in dusty locations, and keep it out of both direct sunlight and rain.
- Always replace the lid when not using your **EP**.
- If your **EP** is not to be used for an extended period of time, remove the batteries and/or disconnect the AC adaptor.

Periodic Maintenance

- Observe the precautions listed in Section 5.
- Clean the outer surface of your **EP** by gently wiping it with a soft, dry cloth.
- Check the cassette ribbon from time to time to ensure that it will not run out while printing a long document.
- Change the batteries when the weak battery indicator lights.

If a problem occurs, check Section 5, Troubleshooting. If you cannot fix the problem yourself, notify your dealer, giving him a full description of the conditions when the problem occurred.

Troubleshooting

If a problem occurs check the following table before contacting your dealer.

Problem	Possible Cause	Possible Solution
Nothing works when the Power Switch is ON.	1-Batteries incorrectly installed. 2-AC outlet has no power. 3-AC adaptor bad.	1-Re-insert correctly. 2-Check outlet by plugging in another device. 3-Check by plugging into another outlet.
Characters do not print.	1-Cassette ribbon installation is incorrect. 2-Ribbon cassette empty.	1-Install correctly. 2-Replace cassette.
Characters too light or too dark.	1-Print density incorrect. 2-Paper incorrect.	1-Adjust print density. 2-Use a different type of paper.
Character density, width, or margins uneven.	Weak power source.	Replace batteries.
Line printout incomplete.	Weak power source.	Replace batteries.
Print head touching platen.	Head incorrectly positioned.	Turn Power Switch ON and then OFF to reposition the print head.



6. APPENDICES

Quick Reference Guide

■ DISPLAY MESSAGES

MESSAGE	MEANING
# CENTERING	The centering function has been set.
# DEMO PRINT	The demonstration program is being run.
E	An error has occurred in a calculation.
# R.M. FLUSH	The right margin flush function has been set.
# PAPER EMPTY	The paper has reached its end.

■ DISPL

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




■ DISPLAY INDICATORS

The following table summarizes the mode indicators, the actions when the modes are set, and how to activate them.

MODE	ACTION	HOW TO ACTIVATE
NP	The EP will not print.	CODE + NP
Line space	1 Single spaced lines. 1-1/2 One and a half spaced lines. 2 Double spaced lines.	CODE + 1—1-1/2—2
AUTO	The EP will perform automatic carrier returns.	CODE + AUTO
L/L	The EP will perform line by line printing.	CODE + L/L
DENSITY	 Dark printing.  Medium printing.  Light printing.	CODE + DENSITY
EXPAND	The EP will print expanded characters.	EXPAND
BOLD	The EP will print bold characters.	BOLD ON to set. BOLD OFF to reset.
UNDL	The EP will underline automatically.	UNDL ON to set. UNDL OFF to reset.
BATTERY	Weak battery indicator.	

■ FUNCTION SYMBOLS

Certain function codes, including those mentioned earlier, will appear on the display but will not be printed. The following table shows how these functions will appear on the display.

SYMBOL	FUNCTION	WHEN DISPLAYED
	Expanded	after the character.
	Bold	 will appear before, and  after the character, or set of characters.
	Underline	 will appear before and  after the character, or set of characters.
	Superscript*	before and after the character, or set of characters.
	Subscript*	before and after the character, or set of characters.

* Functions are explained in Advanced Operations Sections .

“Beep” Tones

The EP will “beep” under the following conditions:

- At the right or left margin.
- At the beginning of the “Hot Zone” (6 spaces before the right margin)
- When an invalid operation is performed
- When the paper has run out.
- At the end of the display memory.

Specifications

Printing Method	24 × 18 dot-matrix thermal
Printing Speed	13 characters per second
Printing Pitch	10 characters per inch (pica pitch)
Paper Capacity	9.6" maximum
Printing Capacity	8" maximum, 80 columns
Line Spacing	1, 1-1/2, 2
Cassette Ribbon	Black, one time heat transfer (approximately 40,000 characters)
Display	7 × 5 dot-matrix, 15 character LCD
Correction	On display before printing
Keyboard	44 keys
Calculator Functions	Four basic arithmetic functions and percentage
Power Sources	AC Adaptor 4 C-size alkaline batteries
Dimensions (W × D × H)	11.5 × 10.6 × 2.2 in
Weight	5.6 lbs including batteries

Dear Cu:

Please u
Please e

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64
60

NAME

ADDRESS

CITY ST.

ACCESSORY ORDER FORM

Dear Customer:

Please use this order form when ordering accessories for your unit.
Please enclose check or money order. All prices include shipping and handling charges.

MODEL		PRICE	Q'TY	TOTAL
6200	PLAIN PAPER (500 SHEETS)	\$ 7.95		
6400	BLACK THERMAL PAPER (200 SHEETS)	\$ 9.95		
6030	CASSETTE RIBBON (3 PACK)	\$12.95		

SHIPPING LABEL

BROTHER INTERNATIONAL CORP.
TYPEWRITER DIVISION
P.O. BOX 159
PISCATAWAY, NJ 08854

NAME _____

ADDRESS _____

CITY STATE, ZIP _____

SUB TOTAL _____

NEW JERSEY AND
CALIFORNIA
RESIDENTS ADD
APPLICABLE SALES TAX _____

TOTAL _____

Above pricing subject to change without notice. For any further information on these accessory items, call toll free 800-526-3537.

PERSONAL ELECTRONIC TYPEWRITER AND WORD PROCESSOR ACCESSORY ORDER FORM

DEAR CUSTOMER:

PLEASE KEEP THIS ORDER FORM TO BE USED WHEN ORDERING
INTERFACE CABLES, CASSETTE RIBBON, PAPER, CARRYING CASE AND
FLOPPY DISK IN THE FUTURE.

PLEASE ENCLOSE CHECK OR MONEY ORDER.

ALL PRICES INCLUDE SHIPPING AND HANDLING CHARGES.

EP & WP MODEL						MODEL	PRICE	QTY	TOTAL
EP-20	EP-22	EP-41	EP41/45	EP-44	WP-600				
	✓			✓	✓	CA50-2	INTERFACE CABLE(TEXAS INSTRUMENTS TI99/4A)	\$49.95	
	✓			✓	✓	CA50-5	INTERFACE CABLE(COMMODORE 64/VIC 20)	\$49.95	
	✓			✓	✓	CA50-8	INTERFACE CABLE(ATARI 400/800)	\$49.95	
	✓			✓	✓	CA50-9	INTERFACE CABLE (NEC PC-8201/PC-8801) SHARP PC-1500 (SORD M223 MARK III)	\$49.95	
✓	✓					6020	CASSETTE RIBBON(5 PACK)	\$14.95	
✓	✓	✓	✓	✓	✓	6200	PLAIN PAPER(500 SHEETS)	\$ 7.95	
✓	✓	✓	✓	✓	✓	6400	BLACK THERMAL PAPER(200 SHEETS)	\$ 9.95	
		✓	✓	✓	✓	6030	CASSETTE RIBBON(3 PACK)	\$12.95	
				✓		6600	ROLL PAPER HOLDER(WHITE)	\$12.95	
				✓		6650	ROLL PAPER HOLDER(BLACK)	\$12.95	
				✓		6700	ROLL PLAIN PAPER(100 FEET)	\$ 5.95	
				✓		6800	ROLL BLACK THERMAL PAPER(100 FEET)	\$ 9.95	
				✓		6900	SOFT CARRYING CASE(FOR WP-600)	\$49.95	
				✓		MFD60	3.5 INCH FLOPPY DISK(10 PACK) FOR FB-100	\$89.95	

SUB TOTAL _____

NEW JERSEY AND CALIFORNIA RESIDENTS

ADD APPLICABLE SALES TAX _____

TOTAL _____

597543087 PRINTED IN JAPAN

SHIPPING LABEL

BROTHER INTERNATIONAL CORP.
TYPEWRITER DIVISION
P.O. BOX 159
PISCATAWAY, NJ 08854

NAME _____

ADDRESS _____

CITY, STATE, ZIP _____