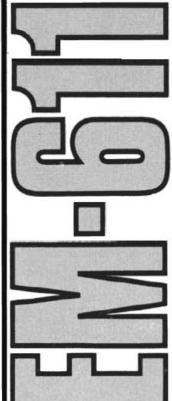


USER'S GUIDE



brother

Thank you for purchasing the EM-611 Office Typewriter. We are sure you will find it a convenient, efficient, and reliable communications tool.

For proper performance and prolonged troublefree 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 typewriter with respect to the receiver
- —Move the typewriter away from the receiver
- —Plug the typewriter into a different outlet so that typewriter and receiver are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions.

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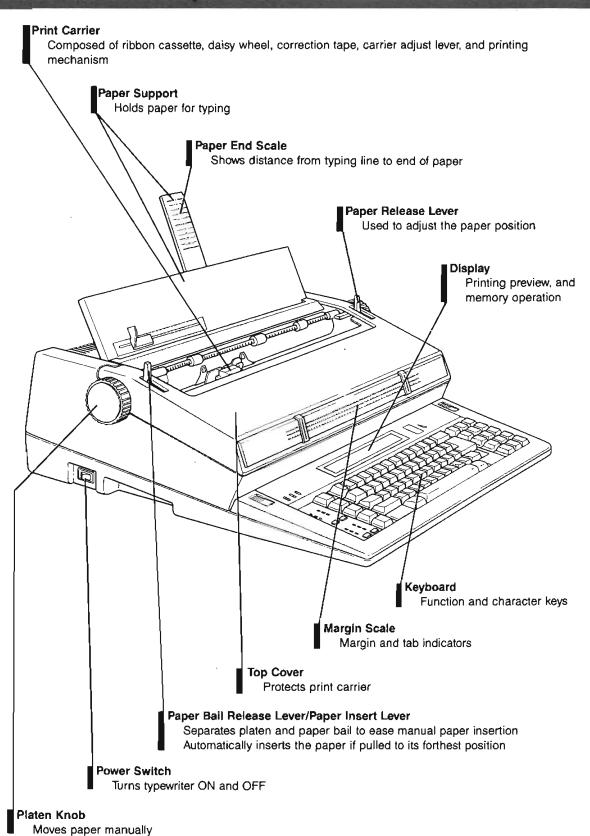
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1. Precautions

- Do not allow any object to enter the interior of the typewriter, especially metal objects such as paper clips or staples.
- Vents are provided on the bottom and the back wall of the case for ventilation. Do not obstruct these vents or otherwise inhibit ventilation.
- Do not place the typewriter where it will be exposed to direct sunlight, high temperature heat sources, or intense vibrations.
- Place the typewriter horizontally.
- If connected to a computer, make sure the printer input cable is shielded and properly grounded.
- Always cover the typewriter when not using it.

2. Parts Description

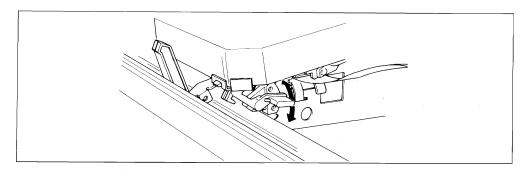


2

Carrier Adjust Lever

You can adjust the carrier to suit the number of sheets of paper you are typing on, or the thickness of the paper.

To change the adjustment, open the top cover and move the carrier adjust lever, which is located on the right front of the carrier. This lever should be set at the position farthest down for paper of standard thickness, and at higher positions for thicker paper. The lever can be set to three different positions.

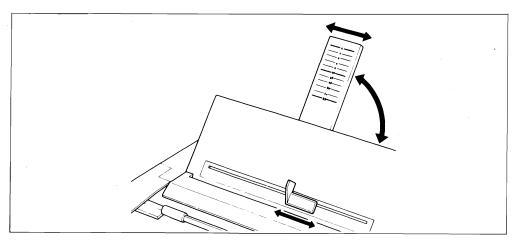


Paper Support Assembly

The paper support assembly consists of the paper support body, paper guide, and support extension. You can easily check and adjust the position of the paper on the paper support. Simply lift it toward you to use.

The support extension is behind the support body and can be pivoted up to use. It can be moved horizontally to the most convenient location. In order to lower it, it must be moved all the way to the right. The lines on the extension can be used to locate the page end position on a sheet of paper.

The paper guide is used to position a sheet of paper at its left edge, and is adjustable. The paper edge guide marks are used to identify the position of the paper.

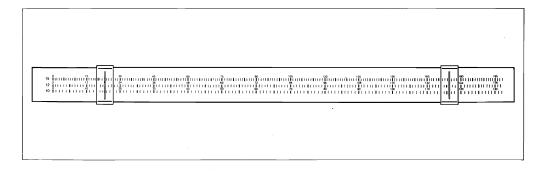


Margin Scale Base

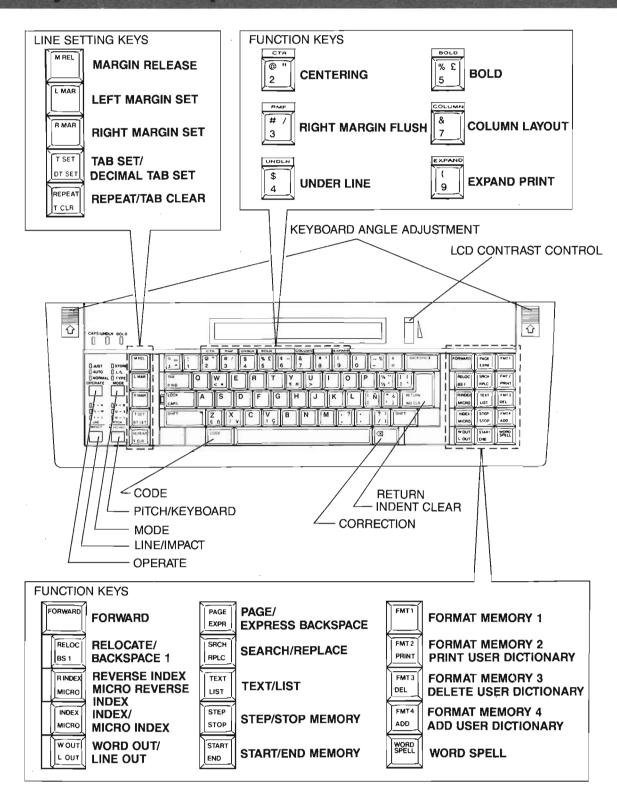
The margin scale base indicates three pitch scales (10, 12, and 15 characters/inch). The left margin, right margin, and tab stop positions, as well as the position of the carrier, can be located on this scale.

The margin stop cursors are used to indicate the left margin and right margin positions, and are set by sliding them to the correct positions.

A yellow marker indicates the carrier print head position.



3. Keyboard Description



Display

A one-line, 40 character liquid crystal display panel is used to display keyboard input. This panel consists of a 36 character text input zone, an area separator, and 3 digit counter zone. Use the control to the right of the display to change the contrast and readability of the display. The text input zone displays characters input in the Line by Line mode, and is used for special functions: centering, justifying, right margin flush, decimal tab and memory storage. This zone is also used to display messages from the typewriter, including special functions, errors, and other information. Characters appear to the left of the text separator, at the position called the "entry point".

The counter zone displays the number of characters between the margins. As characters are typed, this number decreases, showing the number of characters remaining until the right margin is reached.

Message Display Table

Message

4 BETWEEN TAB CENTERING A CENTER ING 4 CHECK PRINTER CLEAR USER DICTIONARY # COVER OPEN △ COLUMN LAYOUT 4 DECIMAL TAB △ DELETE MEMORY ** ⊿ DELETE PAGE «X» 4 DELETE TEXT A DOMN MEMORY △ ERROR! 4 INSERT MODE 4 MACHINE BUSY 4 MEMORY FULL 4 MEMORY OWER 4 MORMAL TAB 4 NOT FOUND 4 OWER A POINT CENTERING △ PAGE FORMAT*X* 4 PAGE FORMAT END △ PARAGRAPH INDENT 4 PHRASE MEMORY **

Explanation

Centering between tabs

Centering text

Printing mechanism faulty

Clears user dictionary (WORD SPELL)

Cover not fully closed

Typing text in columns

Decimal tab stop

Delete phrase memory x

Delete page format x

Delete text memory

Memory faulty

Incorrect operation

Memory insertion

Typewriter initializing, or locating a memory

Memory cannot store more files

Memory capacity exceeded

Tab stop reached during Page Formatting

Word not located during Word Search

Centering over a point

Call up page format x

Page format memory end/used

Paragraph indentation

Call up phrase memory x

4 RAM DOWN
4 R.M. FLUSH
4 ROM DOWN
△ STOP CODE
≥ TAB MARGIN SET
4 WORD SPELL ON
4 WORD SPELL OFF

RAM faulty

Right margin flush

ROM faulty

Temporary printing stop

Setting tabs, margins, etc.

WORD SPELL ON

WORD SPELL OFF

Special Character Display Table

Symbol Code	Meaning	Symbol Code	Meaning
	Hyphen	〒	Centering between tabs
	Space	R	Right margin flush
\rightarrow	Tab	Ļ	Line format
<u>D</u> -	Decimal tab		Ghost hyphen
\downarrow	Return		Space continue
7	Reverse Index	←	Permanent backspace
ŧ	Index	s C	Stop code
Pi	Paragraph indent	w S	Word search
Ţ	Indent clear	R	Replace
∢ A▶	Phrase Memory "A"	Ť	Text name
c	Centering between margins		
	Centering over a point		

Character Keys

Simply press the 46 standard keys to use them. To print non-standard characters (green keys), hold down the **CODE** key and then press the appropriate character key (the markings are shown in green on the keytops).

Apart from the 46 standard keys, the following functions are available when the CODE key and certain of the alphanumeric keys are pressed.

CODE + A to T Phrase memories **CODE** + U to Z Extra characters

CODE key-You will notice that your keyboard has many selections labelled in green. To access any function in green, you must hold down the CODE key while selecting that particular function.

Dead Keys

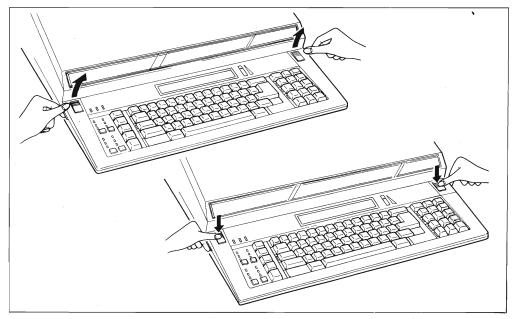
Dead keys do not print by themselves, but must be used in conjunction with another key. They are used for accents and some symbols. See the Accents/Symbols section under Advanced Operations for further information.

Keyboard Angle Adjustment

The typewriter keyboard can be adjusted to three different angles for optimum ease and comfort in typing.

To increase the keyboard angle, simply lift up to the desired position, and the keyboard will lock in place. Make sure that both sides are at the same angle.

Release the keyboard by pressing the buttons on either side. You can then place the keyboard at a lower angle.



4. Standard Functions

Power

The power switch is located on the left side of the typewriter. When the power switch is first turned ON, the carrier and daisy wheel both move to their home positions. During this operation, the keyboard will lock up and the message



will appear on the display: the carrier will move to the left end, then return to the left margin, and finally stop (it has "detected" its home position).

If the following message appears on the display, the top cover is not fully closed:



Press down the cover to close it.

Backup

The typewriter is equipped with a backup function, which retains certain settings for about 500 hours after the typewriter has been switched off. However, the typewriter must have been on for at least one hour for this function to be activated.

The functions which are backed up include the following:

- 1. Pitch and line space settings
- 2. Left and right margins
- 3. Keyboard select
- 4. Mode select
- 5. Operate select
- 6. Impact select
- 7. User dictionary
- 8. Spell check
- 9. Tab stops
- 10. Line format memory 1~4
- 11. Page format memories A to Z
- 12. Phrase memories A to T
- 13. All text memories

Paper Insertion

Insert a sheet of paper behind the platen until it stops against the rear feed rolls, then pull the left paper bail release lever forward, and hold it until the paper stops advancing.

If the lever is held, the paper is fed to the 1" position (7 lines). If the lever is released during paper feeding, the advancing immediately stops.

Daisy Wheel

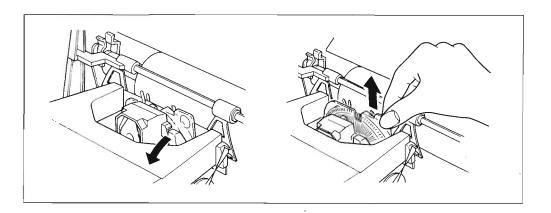
The daisy wheel is fitted into a cassette for easy handling and quick replacement of typefaces. To change the daisy wheel, first open the top cover.

Pull the cassette lock lever towards the keyboard to release the cassette. Then lift the cassette out of the guide slot by its "ear".

Place a new daisy wheel cassette in the cassette guide slot, and press it down. When inserting the cassette, make sure that the "ear" is on the right.

Push the cassette lock lever towards the platen until the cassette clicks in place. It is now locked in position. If the daisy wheel cassette is not properly locked in, characters may not be printed satisfactorily.

Lastly, close the top cover.



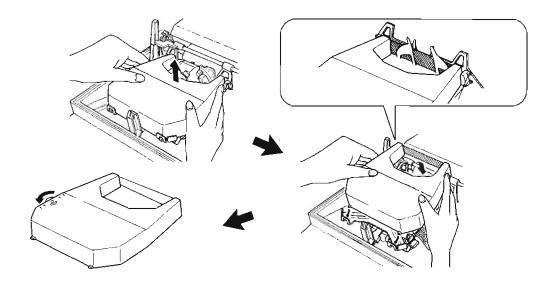
Ribbon

Your typewriter can use four types of ribbons: correctable carbon, multi-strike carbon, one-time carbon, and fabric.

To replace the ribbon cassette, first open the top cover. Lift the cassette by its sides to take it out.

To place a new ribbon cassette on the carrier, first, position the edge nearest the keyboard on the carrier, and then rotate the cassette away from you. Make sure the ribbon passes between the ribbon guides. Press the cassette down to lock it.

After the ribbon cassette has been placed in position, wind the ribbon in the direction shown on the cassette to take up the slack, then close the top cover.



Correction Tape

Your typewriter uses two types of correction tapes; the type depends on the ribbon being used. Lift-off correction tape is used when typing with correctable carbon ribbon. Cover-up correction tape is used when typing with multi-strike carbon, one-time carbon, or fabric ribbons.

To replace the correction tape, first open the top cover.

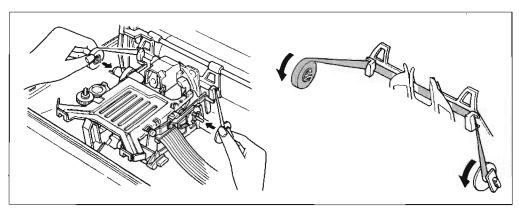
Move the carrier to the center of the typewriter. If the typewriter is on, press the SPACE BAR or BACKSPACE key to center the carrier before you open the top cover.

Remove the ribbon cassette.

Remove the tape spools and tape by pulling them away from the carrier to the left and right, and then lifting up.

To insert a new correction tape, first install the left spool. Then thread the tape across the left and right guide rollers and install the right spool. Make sure that the active side of the correction tape is facing the platen.

After the spools are installed, turn the right spool to take up slack. Replace the ribbon cassette. Lastly, close the top cover.



5. Operations

Settings

There are six selection switches which control the operation of your typewriter: **KEYBOARD IMPACT**, **PITCH**, **LINE**, **OPERATE**, and **MODE**.

Keyboard Select Key

The keyboard select key (KEYBOARD) has 3 settings: I, II, and III. This should be changed to correspond to the daisy wheel being used.

Position I should be used when a standard daisy wheel has been inserted. The characters indicated on the left portion of each key top are printed in this position.

Position II should be used when an "INTERNATIONAL" daisy wheel has been inserted. The characters indicated on the right portion of each key top are printed in this position.

Position III should be used when a "SYMBOL" daisy wheel has been inserted.

Since the keyboard select key is in green, along with the three indicators, to select the keyboard setting, hold down the CODE key. The KEYBOARD/PITCH indicator will flash at one second intervals, showing the current keyboard setting. Continue holding down the CODE key and press the KEYBOARD/PITCH key to select the new keyboard setting. When you release the CODE key, the indicator will stop flashing and show the Pitch selection.

If you need to verify the keyboard selection in use, hold down the CODE key and the current setting will flash.

Impact Select Key

The impact select key is used to change the degree of printer impact, and has four settings: Light, Medium, Heavy and Extra heavy. The impact should be set in accordance with the typeface used, the number of copies to be typed, and the paper quality.

Since the impact select key is labled in green along with the three indications, to select the impact setting, hold down the CODE key. The IMPACT/LINE indicator will flash at one-second intervals, showing the current impact setting. Continue holding down the CODE key and press the IMPACT/LINE key to select the new impact. When you release the CODE key, the indicator will stop flashing and show the Line selection. If you need to verify the impact selection in use, hold down the CODE key and the current setting will flash.

Extra heavy impact is set by pressing the SHIFT key and the IMPACT/LINE key while holding down the CODE key. L and H of the IMPACT/LINE indicator will flash together at one second intervals, showing the Extra heavy impact setting. When you release the CODE key, the indicator will stop flashing and show the Line selection. To release Extra heavy impact, press the SHIFT key and the IMPACT/LINE key while holding down the CODE key again. The indicator returns to the impact setting before Extra heavy was chosen.

Pitch Select Key

The pitch select key (PITCH) is used to change the typing pitch, and should correspond to the daisy wheel being used.

The pitch value changes each time the pitch select key is pressed. Keep pressing the key until the correct LED lights.

Pitch	Characters per Inch	Maximum Characters per Line
10	10	132
12	12	158
15	15	198

Line Space Select Key

The line space select key (LINE) is used to set the line spacing to one of three possible paper feed lengths, according to the following table.

Each time the key is pressed the line spacing changes. Keep pressing the key until the desired LED lights.

Setting	Paper Feed Length
1	single spacing
1-1/2	one and a half spacing
2	double spacing

Operation Select Key

The operation select key (OPERATE) is used to change the typewriter operation regarding the right margin. There are 3 settings: NORMAL, AUTO, and JUST.

The typewriter operation changes each time the **OPERATE** key is pressed. Keep pressing the key until the desired LED lights.

NORMAL is used for ordinary typing operations. The carriage return must be pressed at the end of each line.

AUTO is used to perform automatic carrier returns when a space or hyphen is typed in the Hot Zone.

JUST is used to justify printed lines and performs an automatic carrier return when a space or hyphen is typed in the Hot Zone.

Mode Select Key

The mode select key (MODE) is used to change the typewriter mode. There are 3 settings: TYPE, L/L, STORE. The mode changes each time the MODE key is pressed. Keep pressing the key until the desired LED lights.

TYPE is used for ordinary typing operations.

L/L (Line by Line) is used to type one line of text at a time on the display. Corrections are possible on the display. (See the Line by Line section under Advanced Operations.)

STORE is used to store memory information. This position allows storage of, and changes to, the line format, text, phrase, and page format memories. (See the Memory Operations section.)

5.1 Basic Operations

Margins

Margin settings are used to space text away from the paper edges.

To set the left margin, use the **SPACE BAR** or **BACKSPACE** key to move the carrier to the desired left margin column position. Press the **L MAR** key. The left margin is now set and the carrier will return to this column position every time the **RETURN** key is pressed.

To set the right margin, use the **SPACE BAR** or **BACKSPACE** key to move the carrier to the desired right margin column position. Press the **R MAR** key. The right margin is now set.

If you attempt to set a new margin outside a previous margin, the buzzer will sound and the carrier will stop. Press the MARGIN RELEASE (M REL) key to bypass the previously set margin and then set the new margin. There should be at least 2 inches between the left and right margins. The buzzer will sound if you attempt to set the margins with less than 2 inches between them.

The minimum left or right margin depends on character pitch, as shown in the following table.

Pitch	Minimum Margin
10	20 characters
12	24 characters
15	30 characters

Printing cannot be performed in the column where the right margin was set.

Changing the pitch selector does not affect the margin positions, only the number of characters between the margins.

Backspace

Backspacing moves the carrier back along the same path followed while typing the line. It will move both horizontally and vertically, and even follow index and reverse index movements. You can move the carrier back to the original typing position by holding the BACKSPACE key down, and it will retrace the original typing movements. You can also press the INDEX or R INDEX keys once and still retrace the original movements. If they are pushed more than once, retracing is not possible.

There are three backspace functions available on your typewriter.

To move the carrier back one character only, press the **BACKSPACE** key once. Holding this key down repeats the move continuously.

To move the carrier to the left margin, hold down the **CODE** key and press the **EXPR** key. If you use this express backspace while index or reverse index, the carrier will remain at that vertical position at the left margin.

To backspace in small increments, use the **BS 1** key. One typical use is to type combination characters, such as Roman numerals. Another use would be to "squeeze" a character in between two previously typed characters. Hold down the **CODE** key and press the **BS 1** key. Each time the **BS 1** key is pressed the carrier moves back 1/60". In this case, backspacing will vary according to character pitch as follows:

Pitch	Spacing	
10	1/6 of a character	
12	1/5 of a character	
15	1/4 of a character	

Tabs

A maximum of 20 tab stop positions, including decimal tabs, can be set on your typewriter. To set a tab stop, move the carrier to the desired position with the **SPACE BAR** and/or the **BACKSPACE** key. Press the **T SET** key to set a tab stop.

To move to a tab stop, press the **TAB** key. This moves the carrier to the next tab stop or to the right margin.

To clear a tab stop, move the carrier to the tab position and press the T CLR key while holding down the CODE key. All tab stops can be cleared by pressing down the T CLR key while holding down the CODE key and then pressing the REPEAT key.

Decimal Tabs

When you want to print columns of numbers with their decimal points aligned, use the decimal tab key.

To set a decimal tab, move the carrier to the decimal point column position with the SPACE BAR or BACKSPACE key. Then hold down the CODE key and press the DT SET key. A decimal tab position will be set. If your column does not have decimals but you want to use decimal tabs, you may do so. For example:

Decimal Tab	Decimal Tab	Decimal Tab
\$123,465 78	\$123,000	Randy
234 98	10,000¦	Ann
	!	i

To use a decimal tab stop, move the carrier to the decimal point column position with the TAB key. When the carrier stops, the following message will appear on the display:



Type in the desired numerals (letters may be included). The characters are not printed, but appear on the display. If you make a mistake, use the BACKSPACE, EXPRESS BACKSPACE, FORWARD, CORRECTION, WORD OUT or LINE OUT keys to fix it, then press the RELOC key to return to the last character typed.

The number of characters that can be typed at the decimal tab is displayed after the separatory on the display. If you run out of space for the number you are typing (i.e. there is only one character space remaining before you overtype previously typed characters), the buzzer will sound. If this happens, you must move the position of the decimal tab stop before you can continue.

When you press the TAB or the RETURN key, all the characters typed into the display will be printed.

The SPACE bar immediately after the decimal point input starts printing.

Decimal tab stops are cleared by moving to the tab stop and pressing the T CLR key while holding down the CODE key.

All stops are cleared by pressing down the T CLR key while holding down the CODE key and then pressing the REPEAT key.

Note that when you press the **CORRECTION** key with the below displayed, the guidance is cleared, releasing the decimal tab mode.



The decimal point key differs according to the keyboard specification. For American English it is a period, for British English it is a decimal point, for German and French it is a comma. The decimal point for KBII (International) depends on the country specification. When using decimal tabs, the **BS1** key cannot be used.

Left Margin	Decimal Tab	Decimal Tab	Decimal Tab	Right Margin
	ФЕРА	RTMENT BUDGET		i l
Balaries	1987 Actual \$116,540.00	1988 Plan \$133,000.00	<u>Variande</u> \$16,460.00	
Travel	4,006 118	4,675.00	658.82	i l
Telephone	665 89	700.00	34 . 11	
l βtationery	294 38	250,100	44. 38	
Printing	1,050,00	785 . 00	265 . 00	
Meeting	1,675.87	1,850,00	174 . 13	
Subscriptions	100	84 30	84. 30	
Miscellaneous	567 80	650 00	82 20	
TOTAL	\$124,800,12	\$141,994,30	\$17,802.94	
Tab	Tab	Tab	Tab	

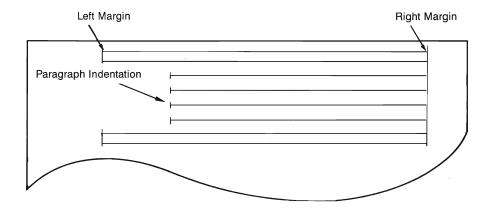
Indentation

To indent a number of lines you must first set a tab at the column position for the indentation. After a tab has been set, hold down the **CODE** key and press the **P IND** key. The carrier will move to the next tab stop. A temporary left margin is set at that position and the following message will appear on the display:

△ PARAGRAPH INDENT

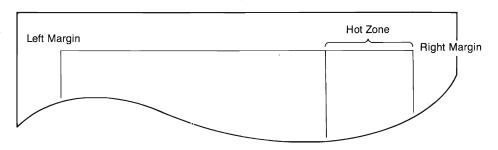
Every time the paper advances, by the **RETURN**, the carrier moves to this temporary left margin, and this message will be displayed. As soon as you type a character, the message disappears.

If the tab stop used to indent a line is set within the Hot Zone, indentation is not possible. To stop indenting, hold down the CODE key and press the IND CLR key. The carrier will return to the original left margin.



Hot Zone

The Hot Zone is the character area between the right margin warning tone and the right margin. The Hot Zone is set at 6 spaces. When the auto mode is selected, a space or hyphen entered in the Hot Zone causes an automatic return.



Repeat

To repeat a key, press that key and then press the REPEAT key. All 96 character keys can be repeated, plus the TAB key, the RETURN key, and the CORRECTION key. The SPACE BAR, BACKSPACE, FORWARD, R INDEX and INDEX keys will repeat by simply holding them down.

Corrections

Your typewriter can make corrections in four ways.

- 1. To correct the last typed character, simply press the CORRECTION key.
- 2. Characters in the current line can be corrected automatically.

First use the BACKSPACE key, or SPACE BAR to move to the incorrect character. Press the CORRECTION key. The character will be erased, but the carrier will not move.

Now type in the correct character. The character will be printed and the carrier will move one space to the right.

When correcting is finished, press the **RELOC** key to return the carrier to the position it was in before the correction procedure began.

To erase more than one character, press the CORRECTION key and then the REPEAT key.

- 3. If the character to be corrected is not on the current line, you must manually correct it. Use the INDEX, R INDEX, SPACE BAR or BACKSPACE keys to move the carrier to the character to be corrected. Hold down the CODE key and press the CORRECTION key. Press the character key to be erased. The character will be erased and the carrier will not move; the correct character can then be typed in.
- 4. Characters which appear in the display can be corrected or deleted, and new characters can be inserted. Use the BACKSPACE key to move the character to be corrected immediately left to the entry point. Delete it with the CORRECTION key and type in the correct character. Press the RELOC key to return display before the correction was made.

Note the following:

Corrections on the current line can be made even if the character pitch of the last printed character is different from the pitch of the character to be corrected.

Characters not on the current line printed after using the BS 1 key should be erased by moving the carrier back to them using the BS 1 key (press the BS 1 key the same number of times you did when originally printing the character).

Overprinted characters can be corrected. Refer to the Overprinting section.

Indexed and reverse indexed characters can also be corrected. The new characters will be printed in the same position as the old characters.

Word Out

To erase a whole word, use the word out function.

First move the carrier to the last character of the word to be erased or to the space immediately after it.

Press the W OUT key and the whole word is automatically erased character by character, and the carrier stops where the first letter of the word had been.

To stop word out in the middle of a word, press the CORRECTION key immediately after the W OUT key.

In display mode, first move the character to the immediate left of the area separator, using the **BACKSPACE** or the **FORWARDSPACE** key. Follow the operation above. While deleting on the display one by one, the carrier moves to the left by the pitch of the character just deleted.

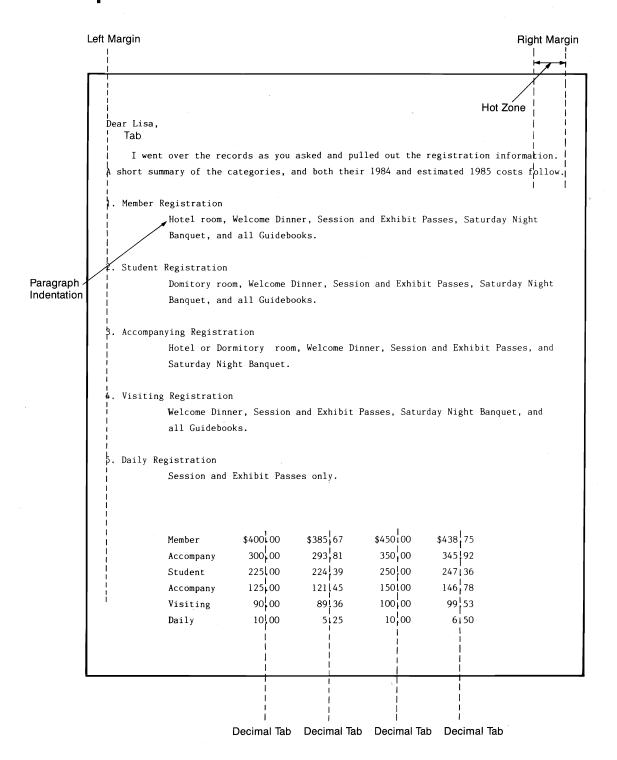
Line Out

To erase a whole line, use the line out function.

First move the carrier to the last character of the line to be erased or to the space immediately after it, using the SPACE BAR, the BACK SPACE key or the RELOCATE key. Press the L OUT key with the CODE key held down, and the whole line is automatically erased character by character, and the carrier stops where the first letter of the line had been. To stop line out in the middle, press the CORRECTION key immediately after the L OUT key.

In display mode, first move the character to the immediate left of the area separator, using the **BACKSPACE** or the **FORWARDSPACE** key. Follow the operation above. While deleting on the display one by one, the carrier moves to the left by the pitch of the character just deleted.

Examples



5.2 Advanced Operations

Automatic Carrier Return

Your typewriter will perform automatic carrier returns at the end of each line when the auto mode is selected.

To set automatic carrier return mode, press the **OPERATE** key until the **AUTO** LED lights.

To cancel automatic carrier return mode, press the **OPERATE** key again until the **NORMAL** LED lights.

If a space or hyphen is typed in the Hot Zone while in **AUTO** mode, the carrier automatically returns to the left margin, and the paper will be fed to the next line. If you do not want the carrier to return after the space or hyphen, use a space continue or hyphen continue in the Hot Zone. If **AUTO** mode is set within the Hot Zone, the next space or hyphen typed will cause an automatic carrier return, even if a space or hyphen has already been typed in the Hot Zone.

In Auto mode, pressing the **SPACE BAR** at the right margin will not cause an automatic carrier return.

Space/Hyphen Continue

While in the Automatic Carrier Return mode, a space can be typed in the Hot Zone by holding down the CODE key and pressing the SPACE BAR.

Likewise, a hyphen can be typed in the Hot Zone by holding down the **CODE** key and pressing the hyphen key.

These operations will not cause a carrier return.

Centering

Your typewriter can center between margins, between tab stops, and over a point.

Between margins

To center text between margins, first move the carrier to the left margin with the **RETURN** key. Press the **CODE** and [2] keys. The following message will appear on the display.



Type in the text. The characters are not printed, but will appear on the display. If a mistake is made, use the BACKSPACE, EXPRESS BACKSPACE or FORWARD keys to locate the error, the CORRECTION, WORD OUT or LINE OUT keys to correct it, and the RELOC key to move to the last character typed.

To print the typed text, press the TAB or the RETURN key.

When printing is complete, the carrier will perform a tab movement or carrier return, as appropriate.

Between tabs

To center text between tab stops, first move the carrier to the desired tab stop with the TAB key. Press the CODE and 2 keys. The following message will appear on the display.

4 BETWEEN TAB CENTERING

If no other tab stop has been set, the right margin will be used instead of a tab stop.

Type in the text. The characters are not printed, but will appear on the display. If a mistake is made, use the BACKSPACE or the FORWARD key to locate the error, the CORRECTION, WORD OUT or LINE OUT keys to correct it, and the RELOC key to move to the last character typed. If the typed characters overrun the space between tab stops, the buzzer will sound. Reset the tab stops and continue.

To print the typed text, press the **TAB** or the **RETURN** key. When printing is complete, the carrier will perform a tab movement or carrier return, as appropriate.

Over a point

To center over a point, first move the carrier to the desired position, using the SPACE BAR or the BACK SPACE key. You cannot center over the left margin or a tab stop.

Then press the CODE and 2 keys.

The following message will appear on the display.

4 OVER A POINT CENTERING

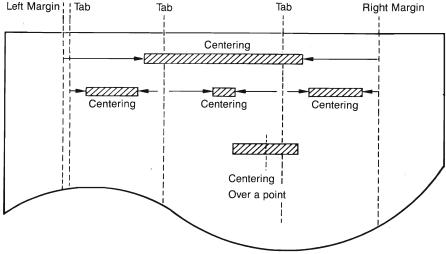
The buzzer will also sound when attempting OVER A POINT CENTERING with less than 2 character's current pitch between the carrier and the character already printed.

Type in the text. The characters are not printed, but will appear on the display. If a mistake is made, use the BACKSPACE, EXPRESS BACKSPACE and FORWARD keys to locate the error. Use the CORRECTION, WORD OUT and LINE OUT keys to correct it, and the RELOCATE key to move to the last character typed.

To print the typed text, press the **TAB** or **RETURN** key. The text will be printed with the first carrier position as the center of the printout.

When printing is complete, the carrier will perform a tab movement or carrier return, as appropriate.

Note that pressing the CODE and 2 keys in the centering mode releases the mode.



Right Margin Flush

To print text aligned with the right margin, use the right margin flush function. Hold down the CODE key and press the 3 key. The carrier will move to the right margin and the following message will appear on the display:



Type in the text. The characters are not printed, but simply appear on the display. If a mistake is made, use the BACKSPACE and FORWARD keys to locate the error. Use the CORRECTION, WORD OUT or LINE OUT key to correct it, and the RELOC key to move to the last character typed. The buzzer will sound if you run out of room between the typed characters and characters already printed.

Press the CORRECTION key, and the RETURN key if you want to print on the next line. The right margin flush function is cancelled by pressing both the CODE and the 3 keys when no characters are displayed. The carrier then returns to the left margin.

To print the typed text, press the RETURN key.

Justify

To print text aligned with both right and left margins, use the JUST position of the operation select key. Press the OPERATE key until the JUST LED lights.

Type in the text. Characters will appear on the display, but they will not be printed. When the end of a line occurs (a space or hyphen in the Hot Zone) the text will be printed justified to the margins. Spaces will be added between words to fill out the line. If the TAB or RETURN key is pressed, the line will not be justified.

If a mistake is made it can be corrected before printing. Use the BACKSPACE and FORWARD keys to move to the incorrect character. Press the CORRECTION key to erase the character. Type in the correct character. Press the RELOC key to return to the end of the typed text.

If you reach the right margin in the middle of a word, use the BACKSPACE or CORRECTION key to return to a point where a hyphen or space can be inserted in the Hot Zone.

To release justified printing, press the OPERATE key again to light the NORMAL or AUTO LED.

Line by Line

To print text a line at a time, use the L/L position of the mode select key. Press the MODE key until the L/L LED lights.

Type in the text. Characters will appear on the display. They will be printed when the **RETURN** key is pressed, or when a space or hyphen is typed in the Hot Zone under **AUTO** operation.

If a mistake is made it can be corrected before printing. Use the **BACKSPACE** and **FORWARD** keys to move to the incorrect character. Press the **CORRECTION** key to erase the character. Type in the correct character. Press the **RELOC** key to return to the end of the typed text.

Characters can also be inserted. To insert characters, use the **BACKSPACE** and **FORWARD** keys to move to the position where you wish to insert characters. Type in the characters. Return to the last position typed before correcting or adding text by pressing the **RELOC** key. To release line by line printing, press the **MODE** key again to light the **TYPE** or **STORE** LED.

Index/Reverse Index

Your typewriter allows you to type both the indexed and the reverse indexed. The paper will move 1/12" (one half of the single line feed amount) up or down for these functions, independent of the set line feed length. The movement keys will repeat if held down.

To print the indexed, first press the **INDEX** key. Then type in the index characters. Press the **R INDEX** key to return to the typing line.

To print the reverse indexed, first press the **R INDEX** key. Then type in the reverse index characters. Press the **INDEX** key to return to the typing line.

Micro Index/Micro Reverse Index

Press the CODE key and the MICRO keys.

The paper will move 1/48" (1/8 of the single line feed amount) up or down for these functions, independent of the set line feed length.

To print below the line, first press the CODE key and the MICRO INDEX key. Type the characters. Press the CODE key and the REVERSE MICRO INDEX key to return to the typing line.

To print above the line, first press the CODE key and the REVERSE MICRO INDEX key. Type the characters. Press the CODE key and the MICRO INDEX key to return to the typing line.

Overprinting

Your typewriter allows you to easily superimpose characters. For example to print Ø, use the zero and slash keys, and to print ÷, use the hyphen and colon keys.

There are two ways to overprint.

The first method of overprinting allows you to use automatic correction if you make a mistake. To overprint this way, type the first character, hold down the CODE key and press the BACKSPACE key, and then type the second character (0, CODE + BACKSPACE,/=∅). The second method does not allow automatic correcting. If an error is made it must be corrected manually. To overprint this way, press only the BACKSPACE key to move the carrier back one space.

Then type in the second character for that position.

Underlining

Your typewriter can automatically underline typed characters in two ways, that is CONT mode and WORD by WORD mode.
Continuous Underline mode: Press the code + 4 keys to turn continuous underline on. The UNDLN LED goes on. Type the WORDs to be underlined. Press the code + 4 keys twice to turn continuous off.
WORD by Word Underline mode: Press the code + 4 key twice to turn on WORD by WORD underline. The LED will blink. Type the words to be underlined. Press the code + 4 keys to turn underline off.

Bold

Your typewriter allows you to print characters in bold-face.
Press the CODE and skeys. The BOLD LED will light. All characters typed in while the BOLD LED is lit will be printed in bold-face. Bold-faced characters are displayed flashing on the display. To stop printing in bold, press the CODE and skeys again. The LED will go out.

Expand Print

Your typewriter allows you to print characters with a space between them. Press the CODE
and (9) keys. The PITCH indicator begins to flash with in one-second intervals, and the carrier
movement is doubled for the characters typed in while the indicator is flashing. Although the
characters will not appear with a space between them on the display, the number in the counter
zone is divided in half to indicate the number of charactors available for input.

To release Expand Print mode, press the CODE and 9 keys again, the PITCH indicator stops flashing and character pitch returns to the original setting.

Word Spell

This Brother typewriter comes with a built-in program called Word Spell.

This program provides a 60000-word main dictionary and about 190-word user dictionary. It compares the words that you type with those in both dictionaries and sounds a beep whenever a word you entered cannot be found in either dictionary.

"The spelling programs contain materials owned, developed, and copyrighted by Houghton Mifflin Company, Boston, Massachusetts, U.S.A. Reproduction or disassembly of embodied computer programs or algorithms prohibited. Based upon The American Heritage Dictionary."

Turning Word Spell on and off

To switch on the Word Spell dictionary, press the WORD SPELL key. The following message will appear on the display.



Pressing this key once again cancels the Word Spell mode. The following message will appear on the display.



Using Word Spell

Begin typing your text. Pressing one of the following keys signals the end of a word and activates the automatic spell check: SPACE bar, PERMANENT SPACE, RETURN (except when there is a hyphen at the end of the line), INDENT CLEAR (except when there is a hyphen at end of the line), INDEX (REVERSE INDEX), TEXT, CODE + A ~T, START (ADD MODE), END, or SLASH.

A beep sounds three times whenever a word is not found in the built-in or in the user dictionary.

Hyphenation

The Word Spell program also checks for hyphenation errors. Should a word be correctly spelled but wrongly hyphenated, the beep sounds.

Example: "beauti- (RETURN) ful" is accepted because it is spelled and hyphenated correctly. "beaut- (RETURN) iful" will trigger a beep because it is incorrectly hyphenated.

However, the hyphen will not be taken into consideration if the letters preceding and following the hyphen are independent words.

Example: "two-words" will be considered correct since both words are correctly spelled.

Rechecking a word

It is possible to recheck the spelling of any word on the current line.

- 1) Align the carrier with the word to be checked.
- 2) Press one of the following keys: RETURN, INDEX (REVERSE INDEX).
- * Moving along the current line with the SPACE bar rechecks the spelling of all the words.

Adding words to the user dictionary

This dictionary has an approximate capacity of 190 seven-letter words (1300 characters). If you add a word to this dictionary when it is full, the least frequently used word is automatically deleted. If the typewriter has been in use for at least an hour, the user dictionary is capable of retaining the words entered for about a week, if the machine is turned off.

To add a word to the user dictionary, position the carrier on the space right after the word you want to store and then pass the **CODE** and **ADD** keys. A beep sounds six times to signal that the process is completed.

If there is no beep, it means that the word already exists in one of the dictionaries, or else that its length prevents registration (words of 2 to 32 characters may be entered).

* Any combination of letters and numbers or symbols can be entered in the user dictionary. A series of numbers and symbols alone, however, will be rejected.

The following chart gives you an idea of the way checking is performed.

The words listed vertically are registered in the user dictionary, and the horizontal series represents the typed words.

	abcd	Abcd	ABCD	aBcD	abcd.	Abcd.	ABCD.	aBcD.
abcd	0	0	0	×	0	0		×
Abcd	×	0	0	×	×	0	0	×
ABCD	×	×	0	×	×	×	0	×
aBcD	×	×	×	0	×	×	×	0
abcd.	×	×	×	×	0	0	0	×
Abcd.	×	×	×	×	×	0	0	×
ABCD.	×	×	×	×	×	×	0	×
aBcD.	×	×	×	×	· ×	×	×	0

O: The word is accepted.

x: The word is refused.

^{*} The "Word Spell" program also checks common first names. For instance, if you write "diana" instead of "Diana", the beep will sound. To avoid it, enter "diana" in the user dictionary if you want to use it with a small "d".

^{*} Common abbreviations are also checked. As a result, the only possibilities accepted for "Mister" are "Mr." or "MR.", "mr./Mr/MR" will be refused.

Deleting words from the user dictionary

Words can be deleted from the user dictionary to make room for new words.

- 1) Type the word you want to delete exactly in the same way as it was entered in the user dictionary. (Special attention should be paid to uppercase and lowercase characters.)
- 2) Place the carrier on the space right after the desired word and press the CODE and DELETE keys.

A beep sounds six times when deletion is completed. If the word cannot be found in the user dictionary, there will be no beep.

Clearing all the words

There is a quick way to erase the user dictionary contents.

- 1) Turn on the Word Spell feature by pressing the WORD SPELL key.
- 2) To erase all the words stored in the user dictionary, press the SHIFT LOCK key to enter SHIFT LOCK state then hold down the CODE key and press the M REL and WORD SPELL keys.

When all the words have been cleared, a beep will sound six times. The following message will appear on the display.



Printing a list of words of the user dictionary

A list of the words contained in the user dictionary can be printed in alphabetical order for your reference.

- 1) Turn on the Word Spell feature by pressing the WORD SPELL key.
- 2) To print out the list, press the CODE and PRINT keys.

The number of entries will be printed on the first line (eg. "NUMBER OF WORDS 34"). The list of words will start on the second line, using the present margins. When printing is complete, the buzzer will sound six times.

To stop the printout process, press the CODE and PRINT keys.

While suspending the printout, the paper position can be adjusted by using the RETURN, INDEX, REVERSE INDEX keys and the paper bail release lever.

To cancel the printout operation, press the CODE and DEL keys. If you want to turn off the WORD SPELL feature as well, press the WORD SPELL to stop both the printout function and the WORD SPELL function.

Lining

By using a "SYMBOL" or "INTERNATIONAL" daisy wheel with your typewriter, you can draw both vertical and horizontal lines. Before you can use this function you must replace the daisy wheel for one with "SYMBOL" or "INTERNATIONAL" fonts. Change the keyboard select switch to position II for the "INTERNATIONAL" daisy wheel, and to position III for the "SYMBOL" daisy wheel.

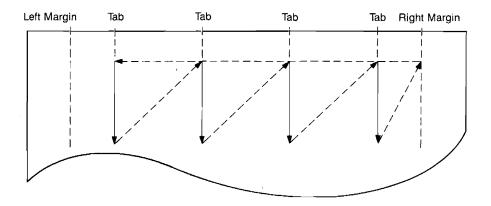
For vertical lines, first clear all the tab stops by pressing the T CLR while holding down the CODE key and then the REPEAT key. Then set tab stops where you want to draw vertical lines.

Move the carrier to the first tab stop set by pressing the TAB key. Then hold down the CODE key and press the vertical line key if you are using the "INTERNATIONAL" daisy wheel or the comma key if you are using the "SYMBOL" daisy wheel. The paper will be fed one line and a vertical line will be drawn. Hold down the REPEAT key until the line extends to the desired length. If you have extended the line too far, use the CORRECTION key to erase the excess.

Now press the TAB key again. The carrier will move to the next tab stop, and the paper will move back down to the point where the first line began.

Hold down the **CODE** key and press the vertical line key (the comma key if you are using the "SYMBOL" wheel) again. Then hold down the **REPEAT** key to draw another vertical line.

When the vertical line is equal in length to the first line, the typewriter will automatically stop. Repeat for each tab stop to draw all the required vertical lines.



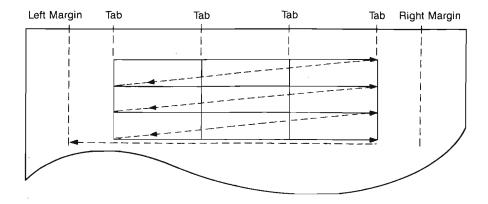
Press the TAB key to move the carrier to the right margin. Then press the TAB key again to return the carrier to the top of the first vertical line.

If you do not want to have horizontal lines, hold down the CODE key and press the IND CLR key to return the carrier to the left margin. If you want horizontal lines, continue with the following directions.

To draw horizontal lines (after vertical lines have been drawn), hold down the CODE key and press either the single line or double line key (depending on which type of line you want), then press the REPEAT key. The line will be drawn across the page and stop at the last vertical line. Use the RETURN key to move to the correct position for the next line.

Again select the type of horizontal line (CODE+line key), and press the REPEAT key to draw it. Repeat for each horizontal line required.

When all lines have been drawn, hold down the CODE key and press the IND CLR key to move the carrier to the left margin.



Column Layout

This function can be used to space columns properly when a list or table is typed. By entering just the longest word or number in each column, the column width can be automatically set. The EM-611 will automatically insert 3 spaces between each column. After preparation, the columns will be automatically centered between the left and right margins.

When a column layout is done, the tab positions will change, so record the current format in a Line format memory, if necessary before you begin.

To set up columns, press the **CODE** and $\boxed{_7}$ keys (carrier must be at left margin). The message margin). The message



will appear on the display.

Type the longest word or number that is to go into the first column. The word or number typed will be displayed but not printed. Then press the T SET key. If the column is to include decimals, press the CODE and DT SET keys after pressing the T SET key, and type in the longest decimal number. The longest decimal number is actually a combination of all the numbers to be entered, using the longest parts from before and after the decimal point. Repeat these steps to type in the next and subsequent columns. After all columns have been typed in, hold down the CODE key and press the \boxed{z} key again. The carrier will automatically return to the first column. Since the paragraph indent is automatically set, the message

4 PARAGRAPH INDENT

will appear on the display.

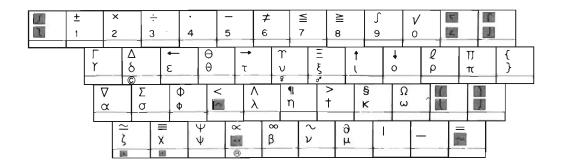
Type the word or number to go in the first column. Then press the TAB key to move to the second column. Continue in this manner. When the list or table is finished, press the CODE and IND CLR keys.

Accents/Symbols

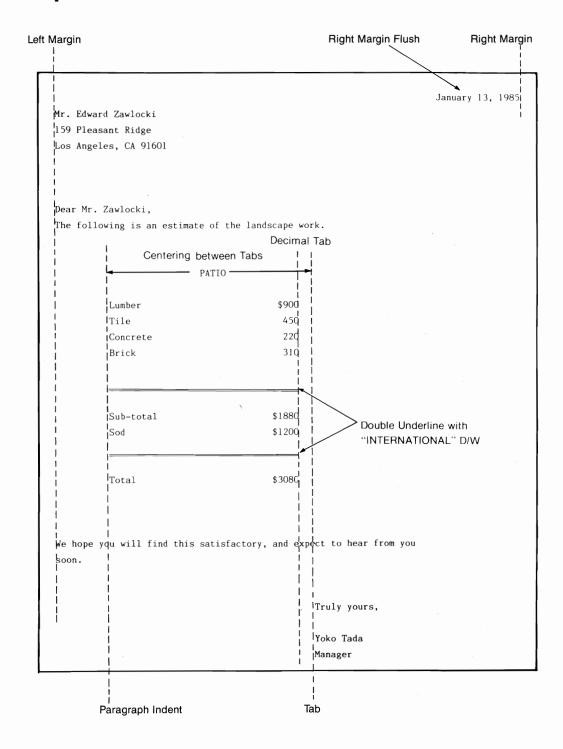
Accents can be typed only if you have inserted an "INTERNATIONAL" daisy wheel. The accents are indicated on the right portion of the key faces. The accent keys can only be used with certain characters, and must be pressed before that character is typed, otherwise they will not be printed.

To type symbols you must insert a "SYMBOL" daisy wheel. The symbol keyboard arrangement is shown below.

To create combined symbols, such as Σ , \S , \S , \S , and \S , type as shown in the following example: To print a Large Integral, first press the \square key. Then hold down the SHIFT key and press the \square key. Finally press the SPACE BAR to print the symbol.



Examples



5.3 Memory Operations

Your typewriter has 4 types of memory: Line Format, Page Format, Text, and Phrase. They are used to store frequently used information. These memories can be verified for name and content, as shown in the List section.

The Phrase, and Page Format memories have a combined total of about 4,000 characters. Text memories have a combined total storage of 12,000 characters. The maximum amount you can store in a single text memory is about 8,000 characters, even if the total memory capacity is 12,000 characters.

Line Format

A line format memory is used to store frequently used line formats consist of margins, tabs, line spacing and pitch.

To store a line format you must first set the margins, tabs, etc. in TYPE mode. When the format has been set, press the MODE key until the STORE LED lights. Then Press one of the FMT1 ~FMT4 keys. The line format will be stored in that memory. Press the MODE key again to light the TYPE or L/L LED before you begin typing. To use the stored line format, you must be in TYPE or L/L mode. To recall the format press one of the FMT1 ~FMT4 keys. The stored format will replace that currently being used.

Page Format

The 26 page format memories are used to store frequently used page formats, such as forms, and are denoted by the letters **A** through **Z**. You can store a total of about 4,000 characters (along with phrase memory). The characters can all be in one memory or divided among them. If you exceed this amount, the message



will appear on the display. Refer to the delete operations of the Phrase and Page Format sections for further information.

To determine the amount of memory left, see the List section.

To store a page format, first set the mode selector to STORE. Press the PAGE key. The message



will appear on the display. Choose one of the memories (A through Z) by pressing the FORWARD SPACE key or the BACKSPACE key then press the RETURN key. The carrier will move to the left margin.

As if you were in NORMAL mode, use the SPACE bar, BACKSPACE key, RETURN key, R. INDEX and/or INDEX keys to move the carrier to the positions where there is information you wish to store. Press the PAGE key to set those stop positions. Every time you store information, the message

→ PAGE FORMAT ***

will appear on the display, where X corresponds to the page format memory being used. Repeat this step until stops for all positions in the page format have been set. Note that if the page you call up already has a format stored in it, the buzzer will sound and the message

⊿ PAGE FORMAT END

will be displayed after you press the PAGE key to store the first stop. You must select another page format memory before continuing. To store a page format, you must start at the top of the page and move to each position in order. You cannot store backward movements.

When storage has been completed, press the PAGE key again, and the message

FAGE FORMAT END

will appear to verify that the page format has been stored.

Note that you cannot change a page format while entering information. You must delete the page format and start over.

To call up a page format, set the mode selector to TYPE or L/L. Press the PAGE key. The message

∠ FAGE FORMAT +A+

will appear on the display. Choose one of the memories (A through Z) by pressing the FORWARD SPACE key or the BACKSPACE key, then press the RETURN key. The carrier will move to the left margin.

If the memory you have attempted to call up is empty, the buzzer will sound. Each time the PAGE key is pressed, the carrier will move to the position specified in memory. Note that if you press the RETURN, R INDEX or INDEX key during operation of page format, the remaining format positions will not change accordingly.

Pressing the CODE and END keys while calling up a page format, cancels calling it up. Calling up a page format is also cancelled when auto paper insertion is done while calling it up, after completing paper feeding.

In both cases, the guidance below is displayed.

△ PAGE FORMAT END

To delete an unnecessary page format memory, first press the PAGE key (in STORE mode). The message



will appear on the display. Choose one of the page format to be deleted (A through Z) by pressing the FORWARD SPACE key or the BACKSPACE key. The carrier will move to the left margin. Hold down the CODE key and press the CORRECTION key. The message



will appear on the display, where the X corresponds to the deleted page format memory. Press any key to continue.

Text

The text memories can be used to store frequently used text, such as reports or standard business letters. You can store up to 8,000 characters as a single text memory file.

If you exceed the amount of installed memory, the message



will appear on the display. Hold down the CODE key and press the END key to terminate text memory storage and, delete another memory to make more room. Refer to the section on Deleting a Text Memory for further information.

Note: The display will read.



when you have stored 8,000 characters into a file. In this case, begin a newfile and continue storing text. To determine the names and sizes of stored text memories, as well as the amount of memory left, see the List section.

Storing Text

To store a text memory you must first set your margins and tabs, then press the MODE key until the STORE LED lights. Once you are in STORE mode, press the TEXT key. The text name symbol



will appear on the display at the entry point. Type in the name of the text, using only letters, numbers, and the hyphen. The text name can be a maximum of 8 characters long and, for later easy reference, should indicate what is in the text you are storing. For example:



Now press the START key to begin entering text.

Type in whatever it is you want to store; This will appear on the display as you type it. The text will print out just as if you were in Line by Line and AUTO modes. When you have finished typing in text, press the CODE and END keys to terminate memory input and finish printing the remaining text.

You can include any of the other typewriter features, such as Right Margin Flush, Centering, etc., in your text memory, as well as the advanced operations described in the Other Text Memory Operations section.

The current line format (margins, tabs, pitch, and line spacing) are included in the text memory. You should set these before you select STORE mode. You can also change the line forms after a Return or an Indent Clear while storing in memory. Press the PAGE key. The message



will appear on the display and the carrier will move to the left margin. Set the new line format.

When finished, press the PAGE key, again. Then continue typing the text.

When print out begins, the stored line formats will be used.

Note: If you require more then the 4 line formats that the EM-611 has featured, you may store additional line formats as texts. Just set up the line format, move the selector to store, press text, type a name, press start, then press the END key.

Each time you need to recall that line format just recall that text and the line format will be recalled.

Editing Text

To Edit text stored in a text memory you must be in STORE mode. Press the MODE key until the STORE LED lights. Press the TEXT key. The text name symbol



will appear on the display at the entry point. Type in the text memory name, just as you did when saving it. Follow this by pressing the START key. The line format symbol will appear on the display at the entry point. For example,



Now use the FORWARD key to move along in the text. Characters and symbols will appear at the entry point, one for each time you press the FORWARD key. The BACKSPACE key is used to move back in the text a position at a time. When you have finished editing hold down the CODE key and press the END key to leave edit mode.

The space just to the left of the text separator is the entry point. This point is used to add, delete, or correct the text memory. To add characters or symbols, just type them in at the appropriate place. To delete characters or symbols, press the **CORRECTION** key when they appear at the entry point.

To move to the next period in the text press the STEP key. The period will appear at the entry point, with the adjacent text on either side of it.

To move to the end of the text memory press the RELOCATE key. The last character or symbol of the text will appear on the display, at the entry point. To move back to the beginning of the text memory, press the CODE and EXPRESS BACKSPACE keys to return to the name message display.



Press the START key and the beginning of the text (the line format symbol) will appear on the display, at the entry point.

You may change the line format of the text after it has been typed by pressing the PAGE key, changing the line formats and pressing the PAGE key again.

Note: if the START key is pressed again (after the text has appeared on the display), the display will clear, but anything typed in will be stored at the end of the file and printed out according to the selected mode.

Word Search

You can search for a word, or words, by pressing the SRCH key immediately after you have entered edit mode, or at any time during editing. The Word Search symbol



will appear on the display at the entry point. The Word Search symbol will be followed by a word if Word Search has been previously used. To delete this word, simply press the CORRECTION key. If you make a mistake, or simply do not want to search for a word now, hold down the CODE key and press the END key to return to edit mode without doing a Word Search.

To search, type in the word, or words, to be searched for. These will appear on the display as you type them. The maximum number of characters you can search for is 31. The display might look like this.



After typing in the characters you want to search for, press the **START** key. The word sought, if found, will appear at the right end of the data zone in the display. You are now in edit mode and can make corrections, etc.

If the word cannot be found, the message



will appear on the display. Press the CORRECTION key to return to the word search display



Press the CORRECTION key again if you want to erase the word sought. Type in a new word to search for, or hold down the CODE key and press the END key to return to the edit mode.

If you are in the middle of a text and want to start search from the beginning, press the CODE and EXPRESS BACKSPACE keys, then the START key, before you begin the search.

A search operation actually works on characters, not words. That is, if you type in the characters "at" as the word to search for, the search could end with the words hat, atrocious, satire, etc. However, typing in "at" (space/at/space) will work correctly.

Be careful of uppercase letters. If you type in "dog", the word "DOG" will not be found.

If you begin a search operation in the middle of a text, the word found will be the next occurrence of that word from the point of the search.

If you are searching for multiple occurrences of a word, press the STEP key instead of the START key. To find each successive occurrence of the word press the STEP key, and the display will show the next occurrence. When you have found the word you want, press the START key to enter edit mode and make changes. You must press the SRCH key again if you want to continue looking for occurrences of the word.

If at any time the word cannot be found, the message



will appear on the display. Press the CORRECTION key to return to the word search display



Press the CORRECTION key again if you want to erase the word sought. Type in a new word to search for, or press the CODE and END keys to return to edit mode.

Bold and underlined words will be treated as ordinary words.

Corrections

To make corrections once a word has been found, use the FORWARD and BACKSPACE keys to locate the character to be corrected, and the CORRECTION key to delete the character. Then type in the correct character.

Replace

You can also replace words that you are searching for. After typing in the word to be searched for, hold down the CODE key and press the RPLC key. The word to be replaced will be followed by the replace symbol



on the display. The replace symbol will be followed by a word if Replace has been previously used. To delete this word, simply press the **CORRECTION** key.

If you make a mistake, or simply do not want to search for and replace a word now, hold down the CODE key and press the END key to return to the edit mode without doing a Search and Replace.

Type in the new word, or words. The maximum number of characters you can replace is 31.



To locate, and replace, all occurrences of the searched for word press the START key. The last word sought and replaced, if found, will appear at the right end of the data zone in the display. You are now back in the edit mode.

If the word cannot be found, the message



will appear on the display. Press the CORRECTION key to return to the word search and replace display.



Press the CORRECTION key again if you want to clear the display. Only the symbols



will appear on the display. Type in new words to search for and then type in the words to replace, or hold down the CODE key and press the END key to return to edit mode.

A replace operation actually works on characters, not words. That is, if you type in the characters "at" as the search word and "by" as the replace word, the operation could end with the words hat, atrocious, satire, etc. changing to hby, byrocious, sbyire, etc. However, typing in "at" (space/at/space) as the search word will work correctly.

To replace multiple occurrences of a word one at a time, press the STEP key instead of the START key. Each time the STEP key is pressed the next occurrence of the word will be found. Hold down the CODE key and press the RPLC key if you want to replace that occurrence of the word. If you do not want to replace that occurrence press the STEP key to search for the next occurrence of the word.

You can return to edit mode at any time during a search and replace operation by pressing the START key.

Printing Out Text

To print out a text memory you must be in TYPE or L/L mode. Press the MODE key until the TYPE or L/L LED lights, as appropriate. Press the TEXT key and the text name symbol



will appear on the display at the entry point. Type in the text name, exactly as it was when stored. Press the START key to print out the text memory. Printing will be bi-directional if the OPERATE key has been used to select either AUTO or JUST modes. In JUST mode, the right margin will be justified.

You can interrupt the printing of text memory. To stop printing, press the STEP key. If the typewriter is in NORMAL mode, printing will stop at the next space between words. If in AUTO or JUST modes, printing will stop at the end of the line, and the carrier will return to the left margin. To continue printing, press the START key. To cancel printing, press the CODE and the END keys immediately after pressing the STEP key.

When printing has been interrupted by pressing the STEP key, you can insert, skip, or replace characters. To insert characters, simply type them in. These characters will appear on the display and be printed out according to the selected mode. If you insert a RETURN, the message



will appear on the display. Continue inserting characters if necessary. To skip characters, press the FORWARD key once for each character you do not want to print. These characters will appear on the display as you press the FORWARD key. To replace characters, first skip over the characters you do not want printed, then type in their replacements as inserted characters. These replacements are displayed. After you have completed these operations press the START key to continue printing. Note that these operations do not affect what is stored in the text memory.

Printing From a Point

To start print out from the desired point, first enter into TYPE or L/L mode, recall a text or a phrase memory then press the SRCH key and then the START key. The display will be as the following.



To designate the desired point, type in the word at the point to be reached.



By pressing the START key, printing begins from the point where the designated word is found for the first time, skipping the part of the memory before the word.

If the designated word is not found in the memory, the guidance below appeares.



Press the CORRECTION key to return to the display before inputting the word. To cancel here, hold down the CODE key and press the END key.

Note that after the word is searched by the STEP key, it's possible to scroll the display by the FORWARD or the BACKSPACE key to the desired position. By pressing the START key here, printout begins from the character immediately right to the area separator.

You cannot scroll beyond a line format $\frac{L}{F}$ mark in the middle of the memory.

Deleting a Text Memory

To delete an unnecessary text memory, first press the TEXT key while in STORE mode. The text name symbol



will appear on the display. Type in the name of the text to be deleted. Hold down the CODE key and press the CORRECTION key. The message



will appear on the display, and the text will be deleted.

Other Text Memory Operations Stop Code

A Stop Code is used to temporarily half printing of a text memory, at which time you can insert, skip, or replace characters, or change the paper.

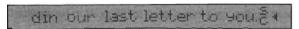
To include a STOP CODE in a text memory, simply hold down the CODE key and press the STOP key at the appropriate point. The message



will appear on the display after the previous text is printed.

There is no limit to the number of STOP CODEs you can place in a text memory.

When editing a text memory, you can delete or insert a STOP CODE symbol as if it were any other character. Press CODE and STOP keys at the appropriate position. The STOP CODE will appear as follows:



When a STOP CODE is reached during print out of a stored text memory, printing will stop and await your response. The Stop Code message



will appear on the display.

You can now insert, skip, or replace characters. To insert characters, simply type them in. These characters will appear on the display and be printed out according to the selected mode. If you insert a RETURN, the message



will appear on the display. Continue inserting characters if necessary. To skip characters, press the FORWARD key once for each character you do not want to print. These characters will appear on the display as you press the FORWARD key. To replace characters, first skip over the characters you do not want to print, then type in their replacements as inserted characters. To change the paper, use the INDEX key or pull the left paper bail release lever forward for paper ejection and insert a new one. Note that it's useful to include a STOP CODE where the print page should be changed. After you have completed these operations press the START key to continue printing. Note that these operations do not affect what is stored in the text memory.

Phrase Memory Within Text

To include a phrase memory in a text memory, you must first have it stored. (See Phrase Memory Section.) Once a phrase memory is stored simply hold down the CODE key and press the phrase memory letter (A through T) at the appropriate point within the text. The phrase memory symbol will appear on the display, alternating with the beginning of the phrase itself. For example, if you type in phrase memory E the display might be:



alternating with the phrase. For example,



If the wrong phrase has been selected, press the CORRECTION key to delete it and enter another.

If the correct phrase appears, press the **START** key to continue entering text. The phrase will print out and the display will appear blank. New text can be stored in memory directly after the phrase symbol.

When editing a text memory, you can delete or insert a phrase memory as if it were any other character.

When a phrase memory symbol is reached during print out of a text memory the correct phrase will be inserted. If no phrase has been stored when this point is reached, printing will stop and the message

will appear on the display, where the X corresponds to the phrase memory used. A phrase can be typed in at this time. Press the START key to print the phrase and continue printing the rest of the text.

Note that if you change a phrase memory which has already been stored in a text memory, the text memory will use the altered phrase when it is printed.

Column Layout within Text

Before using Column Layout, press the RETURN key. To use column layouts, follow the instructions in the Column Layout section. After using Column Layout, the tabset positions will be changed. To return to the previously set line formats after you have finished column layout, press the PAGE key. You can edit a stored column layout exactly as if it were normal text. When a column layout operation is reached during print out the appropriate actions will be taken.

Phrase

The 20 phrase memories can be used to store frequently used bits of text such as headings. You can store a total of about 4,000 characters, (shared with page format memories.)

They can all be in one memory or divided among them. If you exceed this amount the message

will appear on the display. Hold down the CODE key and press the END key to terminate phrase memory storage, and delete another memory to make more room.

To determine the amount of memory left, see the List section.

To store phrases, you must first press the MODE key until the STORE LED lights. Hold down the CODE key and press one of the 20 character keys, A through T. The message

will appear on the display, where the X corresponds to the letter pressed. If you select a phrase memory which already has something stored in it, the message



will alternate with the beginning of the phrase itself, for example,



on the display, where the X corresponds to the phrase memory letter. You must either select a new phrase memory or delete the present one to continue.

To begin entering a phrase, press the START key. Type in the phrase or heading, desired. The RETURN, INDEX, R INDEX, CTR, RMF, and STOP CODE operations are allowed in a phrase memory.

When you are finished typing, press the CODE and END keys to stop entering information into the phrase memory.

To print out the phrase stored in a phrase memory, you must be in TYPE or L/L mode. For example, to print from phrase memory E, hold down the CODE key and press E. The message

will alternate with the beginning of the phrase itself, for example,

on the display. Press the START key and the typewriter will print out exactly what was stored in phrase memory E. In NORMAL mode, printing is uni-directional, from left to right. In AUTO mode, printing is bi-directional. In JUST mode, printing is bi-directional and justified.

Please note that printing is done in the present line format, not in the line format set when the phrase was stored. For example, if the margins were set to 60 columns when the phrase was stored and the present margins are set to 80 columns, the printed copy will have 80 columns.

To delete an unnecessary phrase memory, first hold down the CODE key (in STORE mode) and press the letter of that memory (A through T). The message

will alternate with the beginning of the phrase itself, for example,

on the display, where the X corresponds to the phrase memory letter. Hold down the CODE key and press CORRECTION key. The message

will appear on the display, where the X corresponds to the deleted memory letter. Press any key to continue.

To edit a phrase memory, first hold down the CODE key (in STORE mode) and press the letter of that memory (A through T). The message

will alternate with the beginning of the phrase itself, for example,

It's really a good idea to do ⊀

on the display, where the X corresponds to the phrase memory letter.

After pressing the START key, use the FORWARD and BACKSPACE keys to locate the correction position and the CORRECTION key to erase the incorrect characters. Next, type in the correct characters or insertions, if necessary. Press the CODE and the END keys.

You can use the STEP key to locate the next period in a phrase memory, the RELOC key to locate the end of the phrase, and the CODE and EXPRESS BACKSPACE keys to move back to the beginning of the phrase. Word search, and search and replace, are also allowed.

You can set temporary stops in a phrase memory. For example, if you are sending the same letter to different people you can store the letter without a name on it. To do this, type in the letter and when you get to a person's name simply hold down the CODE key and press the STOP key. The message



will appear on the display.

Continue with the letter. When printing out the letter, the typewriter will stop when the name position is found in memory. The message



will appear on the display.

Type in the required name and it will appear on the display. Press the START key to print the name and the rest of the letter. This stop code can be used as many times as desired.

While the text is being printed out, you can use the STEP key to stop printing. In NORMAL mode, printing will stop at the next space (after the STEP key is pressed). In AUTO or JUST modes, printing will stop at the beginning of the next line.

When printing has stopped after pressing the STEP key, you can use the Skip function. Press the FORWARD key and characters will appear one at a time on the display. Each one will not be printed out when printing is resumed, so display as many as you wish to skip. At this point, you may also insert different text. Now press the START key; printing will begin again, at the point after the last "skipped" character was displayed. This is handy for making deletions or corrections in the printout without changing the stored text.

List

LIST mode is used to determine what has been stored in the memories and the number of characters left in them. Hold down the CODE key and press the LIST key. Once you are in LIST mode the message



will appear on the display.

The paper position can be adjusted by using the INDEX, R INDEX keys or auto paper insertion with the message above displayed.

If you press the N key, the number of characters left in the Phrase and Page Format memories will be displayed. This is a combined total for these memories. The message



will appear on the display, where XXX is the number of characters.

Press the START key at this point to print out the display message, as well as the names and lengths of the individual memories. (They will be printed out with the following format,: Pitch-10, Linespace-1, Margin-10 and 75, so be sure a large enough piece of paper is inserted.)

If you do not wish the information to print, but wish to view it on the display, press the STEP key to obtain the number of characters stored in specific memories. If you have not stored any memories, the display will return to the message



otherwise, one of the following messages will appear on the display.



In these messages, Y is the memory letter designation and XXX is the number of characters in that memory.

Every time you press the STEP key, the message will change to indicate another memory. When all memories have been displayed, the message



will re-appear on the display. You can now exit LIST mode by pressing the CODE and LIST keys. You can pressing the CODE and END keys at any time to return to the same message.

If you press the Y key, the number of characters left in the Text memory will be displayed. The message



will appear on the display, where XXX is the number of characters left.

Press the START key at this point to print out the display message, as well as the names and lengths of the individual text memories (They will be printed out with the following format, Pitch-10, Linespace-1, Margin-10 and 75, so be sure a large enough piece of paper is inserted.)

If you do not wish the information to print, but wish to view it on the display, press the STEP key to obtain the number of characters stored in specific text memories. If you have not stored any text memories the display will return to the message



otherwise, a message, like the following example will appear on the display.



In these messages, TEXT will be followed by the text memory name and the number of characters in that memory.

Every time you press the STEP key, the message will change to indicate another text memory. When all text memories have been displayed, the message



will re-appear on the display.

You can press the CODE and END keys at any time to return to the same message. To finish the LIST mode, hold down the CODE key and press the END key or hold down the CODE key and press the LIST key.

6. Maintenance and Troubleshooting

In order to ensure long and troublefree use of your typewriter, you should restrict self-maintenance to replacement of the daisy wheel and ribbon cassette only.

Observe the precautions listed in the front of this guide.

Periodically clean the outer surfaces of the typewriter, using a soft dry cloth, to remove visible dust or foreign matter. Do not use water, alcohol, thinner, or other organic solvents.

Check the ribbon cassette and correction tape from time to time to ensure they are not running out.

Check the daisy wheel and clean it with a soft brush if necessary.

At least once a month, perform the continuous self-test to ensure proper typewriter operation and to locate problems before they become serious.

If trauble occurs, check the following:

PROBLEM	CHECKS
Nothing works after the power is	1. Is the cord plugged in?
switched ON.	2. Is the cover open?
	3. Are any messages displayed?
	(See Diagnostics)
Typed characters do not print, or are faint.	1. Is the daisy wheel inserted correctly?
	2. Has the ribbon run out?
	3. Is the ribbon cassette positioned properly?
	4. Is the ribbon selection switch in the correct position?
	5. Are the keyboard and impact switches
	in the correct position?
Cannot make corrections on the paper.	Has the correction tape run out?
	2. Is the correction tape positioned properly?
	3. Are the correction tape and ribbon
	matched correctly?

If you cannot solve the problem by yourself, contact a service agency and give them a full description of the circumstances when the problem occurred.

Diagnostics

Your typewriter automatically performs its own error checking operations. If any of the following indications appear, there is a major problem with the typewriter, and you should immediately contact your service agent.

If an error occurs which is not severe enough to damage the typewriter (for example, host and slave CPU's have different data), your typewriter will reset itself to the state it was in when power was first switched ON.

If an error occurs which is severe enough to damage the typewriter, one of the following messages will appear on the display and the keyboard will lock up.

Display Message/ Flashing Indicator	Reason
ROM DOWN	ROM faulty
RAM DOWN	RAM faulty
DOWN MEMORY	Memory faulty
CHECK PRINTER	Printing mechanism faulty
LINE, PITCH LEDS	Display faulty

This information is only for the use of a qualified technician and under no circumstances should an operator attempt to repair the typewriter.

If DOWN MEMORY is displayed, re-initialize the unit by pressing the SHIFT LOCK key, then the CODE, M REL, and CORRECTION keys simultaneously. If the problem is not solved, call a serviceman.

Continuous Self-test

The following test is available to help you check your typewriter.

Operation

- 1. Select the line spacing desired with the LINE key.
- 2. Select the character pitch desired with the PITCH key.
- 3. Press the SHIFT LOCK key. The LED will light.
- 4. Depress and hold down the following keys in this order: CODE, M REL, and R INDEX.
- 5. When the self-test begins you can release the keys.

Result

The keyboard locks up, the carrier returns to the left margin, and printing starts. Printing will continue until power is switched OFF.

Characters will be printed across the width of the platen and will appear in the same sequence as on the print wheel. The sequence of characters will move one space to the left after each line is printed ("barber pole" fashion).

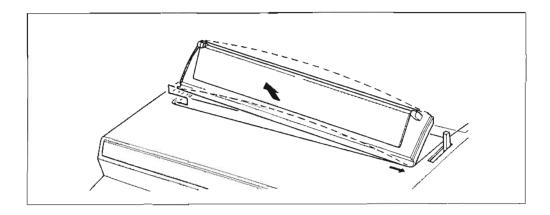
7. Accessories

Acoustic Cover (Option)

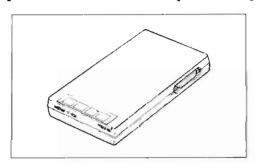
An acoustic cover is optionally available to suppress sound from the printing mechanism, and to prevent dust and foreign matter from entering the typewriter.

You should use the typewriter with the acoustic cover closed.

To install the acoustic cover and the attached glare-proof plate, first put the right side pin of the acoustic cover into the hole on the right side of the top cover. Bend the acoustic cover slightly, and put the left side pin into the hole on the left side of the top cover. Press the cover down to lock it in place. Reverse this procedure to remove the acoustic cover.



Computer Interface (IF-60A)



There are two computer interfaces available for your typewriter: CDCC parallel and RS-232C serial. See the IF-60A manual for further information. CAK-60 cable is necessary to connect IF-60A.

8. Reference Guide

■ Basic Operations

OPERATION (KEY/S)	EXPLANATION	PAGE
Backspace (BACKSPACE)	Carrier moves one space left	16
Backspace 1 (CODE + BS1)	Carrier moves left 1/60"	17
Code (CODE)	Use for special functions	9
Correction (🗵)	Use to erase a character from the paper or display	21
Decimal Tab Set (CODE+/DT SET)	Sets decimal tab stops	17
Express Backspace (CODE + EXPR)	Moves the carrier back to the left margin, without a line feed	17
Impact Select (CODE + IMPACT)	Sets the amount of printer impact	13
Indent Clear (CODE + /IND CLR)	Releases the temporary paragraph indentation	19
Keyboard Select (CODE + KEYBOARD)	Sets the keyboard for the daisy wheel	13
Left Margin Set (L MAR)	Sets the left margin	16
Line Out (CODE+/L OUT)	Use to erase a line from the paper	22
Line Space Select (LINE)	Sets the line spacing	14
Margin Release (M REL)	Temporarily releases the set margins	16
Mode Select (MODE)	Sets the mode of the typewriter	15
Normal .	Sets the typewriter for normal operation, with the OPERATE key	14
Operation Select (OPERATE)	Sets the operation of the typewriter	14

OPERATION (KEY/S)	EXPLANATION	PAGE
Paragraph Indent (CODE + P IND)	Moves carrier to next tab and sets a temporary left margin	19
Pitch Select (PITCH)	Sets the typing pitch	14
Repeat (REPEAT)	Use to repeat a previously pressed key or function	20
Return (RETURN)	Moves the carrier to the left margin and advances the paper one line	_
Right Margin Set (R MAR)	Sets the right margin	16
Shift (SHIFT)	Use to temporarily print uppercase characters or release Shift Lock	-
Shift Lock (LOCK)	Use to continuously print uppercase characters	_
Space (SPACE BAR)	Moves the carrier 1 space to the right	_
Tab (TAB)	Moves the carrier rightward to the next tab stop	17
Tab All Clear (CODE+T CLR+ REPEAT)	Use to delete all tabs	17
Tab Clear (CODE+T CLR)	Use to delete a tab stop	17
Tab Set (T SET)	Use to set a tab stop	17
Туре	Sets the typewriter for normal typing, with the MODE key	15
Word Out (W OUT)	Use to erase a word from the paper	22

■ Advanced Operations

OPERATION (KEY/S)	EXPLANATION	PAGE
Bold (CODE + 5)	Use to print characters in boldface	28
Caps Lock (CODE + CAPS)	Use to type numbers and uppercase letters at the same time	_
Column Layout (CODE+7)	Use to space columns properly	33
Centering (CODE + 2)	Use to center text between left and right margins, between tabs or over a point	24
Expand Print (CODE + 9)	Doubles current character pitch	28
Hyphen Continue (CODE + HYPHEN)	Use to temporarily override an automatic carrier return	24
Index/Peverse Index (INDEX/R-INDEX)	Advances/Retracts the paper half a line respectively	27
Justify (JUST)	Sets the typewriter for justification operation, with the OPERATE key. Typed lines are justified between margins	26
Line by Line (L/L)	Sets the typewriter in line by line printing mode, with the MODE key. Lines are printed one line at a time	27
Lining	Use to make vertical or horizontal lines	32
Manual Correction (CODE+ ⟨X)	Use to make corrections other than auto corrections	21
Micro Index/Micro Reverse Index (CODE + MICRO)	Advances/Retracts the paper 1/8 line respectively	27

OPERATION (KEY/S)	EXPLANATION	PAGE
Overprint	Use to print more than one character in the same space	28
Relocate (RELOC/BS1)	Returns carrier to previous position after correction	21
Right Margin Flush (CODE + 3)	Use to print text aligned with the right margin	26
Space Continue (CODE + SPACE BAR)	Use to temporarily override an automatic carrier return	24
Underlining (CODE + 4)	Use to print underlined characters both in continuous and WORD modes	28
Word Spell	A built-in spell checker WORD SPELL to turn ON the WORD SPELL dictionary CODE + ADD to add a word to the dictionary CODE + DEL to delete a word from the dictionary SHIFT + CODE + M REL + WORD SPELL to clear the dictionary CODE + PRINT to print the cotents of the dictionary	29

■ Memory Operations

OPERATION (KEY/S)	EXPLANATION	PAGE
Begin Entering text (START)	Start storing in memory	39
Delete Memory (CODE + ⊠)	Erases contents of memory Must be in STORE mode	43
Display Movement	Use to move within the display BACKSPACE to move one character back FORWARD to move one character forward RELOC to move to the last character in the memory	_
Finish Entering Text (CODE + END)	Stop storing text in memory	38
Format Memory (FMT 1—FMT 4)	In type mode, sets new line format In display mode, retains line format	36
Interrupt Printing (STEP)	Temporarily halts printing from a text memory	42
LIST (CODE + LIST)	Use to obtain memory information, with the LIST key	47
Locate Periods (STEP)	Use to search for periods in a text memory	39
Locate Words (SRCH)	Use to search for words in a text memory	40
Page Format Memory (PAGE)	In TYPE or L/L mode, sets new page formats In STORE mode, retains new page formats	36
Phrase Memory (CODE + A to T)	In other than STORE or LIST mode, prints out memory contents In STORE mode, retains a phrase or text	45
Print Memory Information (START)	In LIST mode, prints out memory names and length	47
Replace Words (CODE + RPLC)	Use to locate and replace words in a text memory	41

OPERATION (KEY/S)	EXPLANATION	PAGE
Start Printing (START)	Continue printing from memory	42
Stop Code (CODE + STOP)	Sets a temporary stop in a text or phrase memory	43
Store	Use to store formats, phrases or texts with the MODE key	36
Text Memory (TEXT)	In TYPE or L/L mode, prints out text from memory In STORE mode, retains text in memory	38

9. Specifications

Printing Method "Cassette" type daisy wheel (96 chars)

Printing Speed 16 characters per second

Printing Pitch 10 (132 characters per line, maximum)

12 (158 characters per line, maximum) 15 (198 characters per line, maximum)

Typeface Dependent on type of daisy wheel

 Paper Width
 16.5" (420mm)

 Printing Width
 13.2" (335mm)

 Line Spacing
 1, 1.5 and 2

Ribbon Cassette Correctable carbon

Multi-use carbon One-time carbon

Fabric

Correction Tape Lift-off

Cover-up

Correction One line

Memory Storage 16,000 characters
Keyboard 46 keys, 2-keys rollover

Power Consumption 40W

Dimensions 21.2" × 18.4" × 6.0" (537mm × 468mm × 153mm)

Weight 25.4lbs. (11.5kg)



