

IBM
WHEELWRITER 3000
BY LEXMARK

User's Guide

LEXMARK

REFERENCE	
Dealer Name	
Dealer Phone Number	

PRODUCT INFORMATION	
Typewriter Name	IBM Wheelwriter 3000
Machine Type *	
Serial Number (S/N) *	

HELP / ASSISTANCE	
Technical Problems	Contact your local dealer
Lexmark Technical Support (US)	606-232-3000
Lexmark Dealer Referral (US)	800-358-5835
Comments?	Return card at back of manual or write to us at the address below

* Machine Type and Serial number can be found inside the typewriter as shown under "Serial Number" on page 6-15.

Note: Intentionally removing, destroying or altering the Lexmark serial number may be a violation of consumer laws. Further, Lexmark will not honor warranty claims for machines without the original, factory affixed serial numbers. If your typewriter does not have a factory affixed serial number, you should contact the dealer that sold you the machine immediately.

Lexmark International, Inc.
 Typewriter Customer Satisfaction, Dept. J30/005
 740 New Circle Road NW
 Lexington, KY 40511 USA

Congratulations!

You have just purchased one of the best typewriters ever made! The IBM Wheelwriter Typewriter by Lexmark is designed to be easy to use and to provide you with many years of dependable service. We are sure you will be pleased with its quality, from the easy to use functions to its outstanding print quality. For your continued satisfaction with print quality, you should always use genuine IBM ribbons and printwheels by Lexmark for your typewriter.

Please fill out the Reference and Product Information on the opposite page for future use (should you ever need service or help with any of the typewriter's operations).

Please help us learn more about your typing needs by completing the customer response card (U.S. only) that was included with your typewriter. For customers outside the U.S., please write to us at the address shown on the opposite page. Your input helps us continuously improve our products for future customers. If you have any comments later, please write to us at the address inside the front cover.

IBM typewriters have led the industry with outstanding features, quality and reliability for over half a century. Lexmark International, Inc. was created in 1991 from a division of IBM and is an independent company that develops, manufactures and markets IBM typewriters, IBM personal and network printers, information processing supplies, notebook computers and keyboards.

Thank you for being our customer and enjoy your new typewriter!

The Lexmark Typewriter Team

About Your Typewriter

You are about to experience typing with your new IBM® Wheelwriter® 3000 Typewriter.

Designed with you in mind, this typewriter includes many useful functions such as Word Underline, Word Erase, Bold Print, Centering, Line/Box Draw, Right Flush, Column Layout and Spell Check. These functions give you excellent typing quality and make your typing more enjoyable.

Paper and carrier movement keys, located to the right of the keyboard, allow you to move quickly and easily—up, down, left or right to any location on the paper.

The storage function allows you to store jobs for later use. The typewriter has a storage capacity of approximately 48,000 bytes (about 15 to 25 pages). After you store a job, you can play it back and revise it without retyping the entire job. You no longer have to retype frequently used jobs, such as form letters, repetitive paragraphs, and statistical reports.

Repetitive preprinted forms can be completed with the Mark function in combination with the typewriter's storage. You can store both constant information and Mark locations to stop for variable information. After you store the job (form), you can play it back typing in variable information where the typewriter stops. The good writing line visibility enhances this function.

Your typewriter has a PowerWise™ mode which conserves energy when the typewriter is ON but not in use. The typewriter reduces power consumption when inactive for more than a 10-minute time interval.

You can enhance your IBM Wheelwriter 3000 Typewriter by adding the following options:

- Printer Option
- Dust Cover
- Sound Hood

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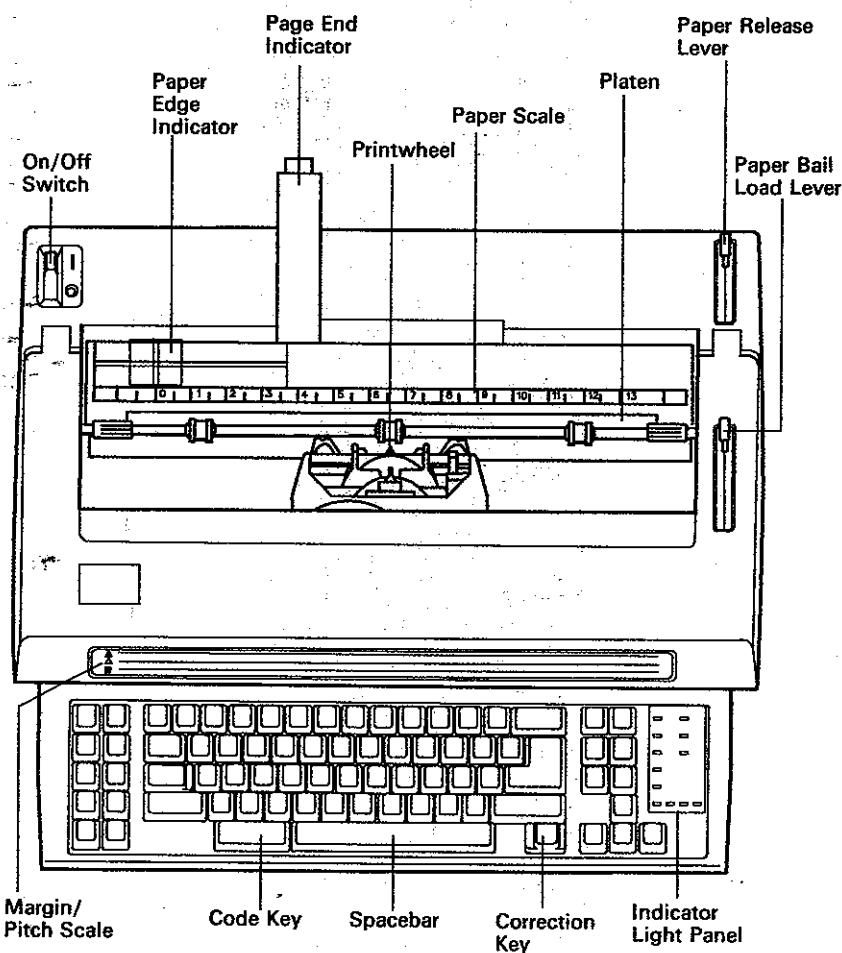
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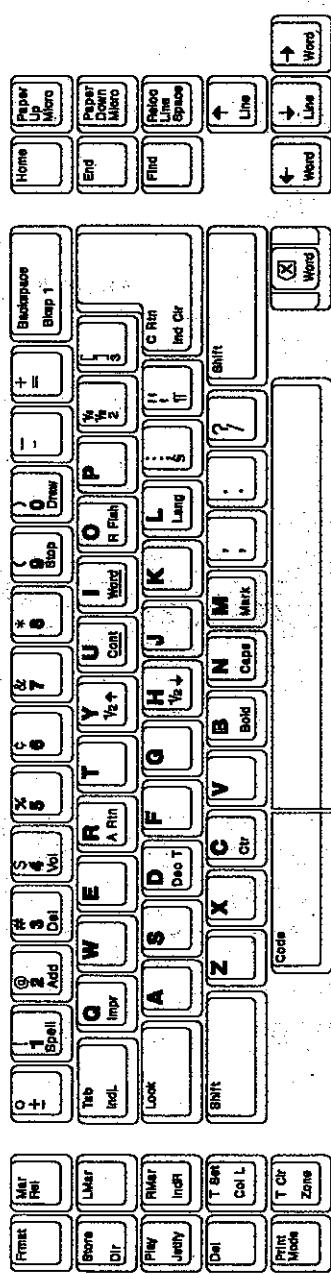
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Basic Operations

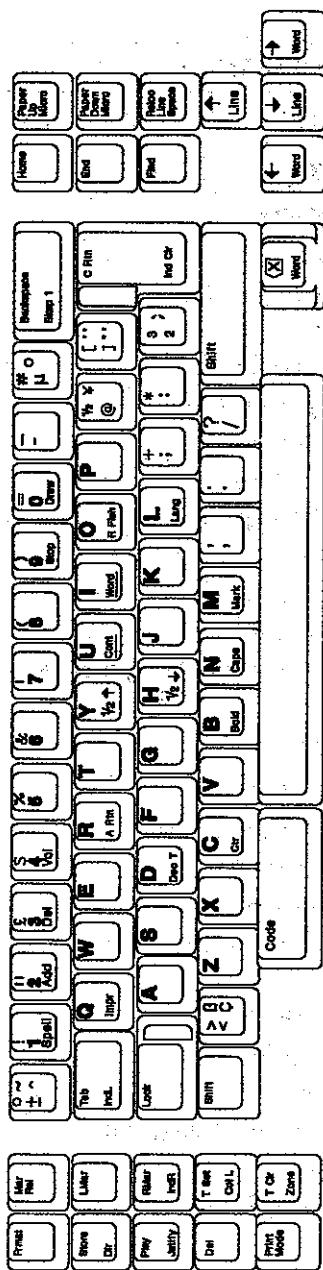
Parts of the Typewriter



Keyboard Layout - U.S.



Keyboard Layout - United Kingdom



Keyboard Legend

Abbreviation	Function/Action	Symbol
Frmat	Format	FM
Store	Store	◆
Dir	Directory	DIR?
Play	Play	◀
Jstify	Play Justified	◆N
Del	Delete	■■■
Print Mode	Print Mode	Pt
Mar Rel	Margin Release	↔
LMar	Left Margin	L
RMar	Right Margin	R
IndR	Indent Right	↑
TSet	Tab Set	T+
Coll.	Column Layout	HH
TClr	Tab Clear	T-
Zone	Variable Right Margin Zone	KK
Tab	Tab	→
IndL	Indent Left	→
Lock	Shift Lock	⊕
Impr	Impression Control	○○
DecT	Decimal Tab	Dec
Ctr	Centering	I-I
ARtn	Automatic Carrier Return	AR
Bold	Bold Print	ala
½ ↑	Superscript	½▲
½ ↓	Subscript	½▼
Caps	Caps	▲A
Cont	Continuous Underline	a...
Mark	Mark	◎ a
Word	Word Underline	aaa
Stop	Stop	◎

Abbreviation	Function/Action	Symbol
RFish	Right Flush	aaa→
Lang	Alternate Keyboard	▲
Draw	Draw	■
Backspace	Backspace	◀
Bksp 1	Backspace - Micro	◀+
CRtn	Carrier Return	↓
Ind Clr	Indent Clear	◀+■
☒ (Word)	Correction	☒
	Correction - Word	aaa☒
Home	Home	↖
End	End	↗
Find	Find	?aaa
Paper Up	Paper Up - ½ Line	↑
Micro	Paper Up - Micro	↑+
Paper Down	Paper Down - ½ Line	↓
Micro	Paper Down - Micro	↓+
Reloc	Relocate	→
Line Space	Line Space	±
↑ ↓	Line Up/Line Down	↑ ↓
↑(Line)	Line Up - Next Line with Text	↑±
↓(Line)	Line Down - Next Line with Text	↓±
← →	Carrier Movement - Left/Right	← →
←(Word)	Carrier Movement - Previous Word	aaa←
→(Word)	Carrier Movement - Next Word	→aaa
Spell Check		
Spell	Spell Check On/Off	□
Add	Add a Word to the Dictionary	WORD
Del	Delete a word from the Dictionary	DEL
Vol	Spell Check Volume	VOL

On/Off Switch

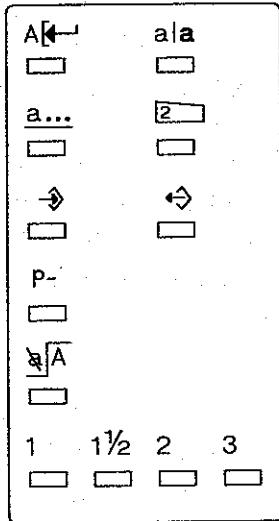
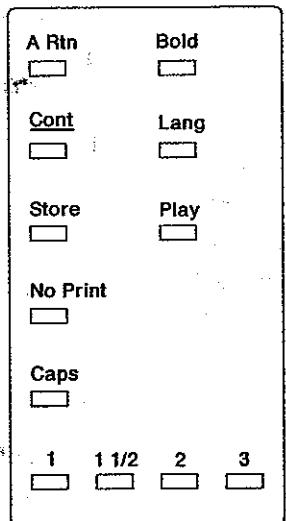
To turn the typewriter on or off, press the switch located on the left side of the typewriter. Pushing the switch toward the **I** turns the typewriter on while pushing the switch towards the **O** turns the typewriter off.

Helpful Hints

- Install a printwheel before you type. See "Changing the Printwheel" on page 6-9.
- Do not turn the typewriter off when the **Store** indicator is on or blinking quickly.
- Wait five seconds after turning the typewriter off before you turn it back on. This allows the typewriter to reset.

Indicator Light Panel

The indicator light panel to the right of the keyboard shows you if a function is on or off and also if operator action is required. Your specific typewriter has one of the indicator panels shown below:



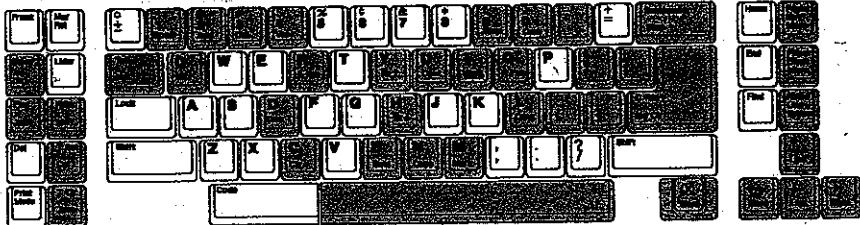
Indicator Lights

Indicator Name	Description	Page
Indicator On		
ARtn	Automatic Carrier Return on	2-1
Bold	Bold Print on	2-11
Cont	Continuous Underline on	2-6
Lang	Alternate Keyboard on	2-21
Store	Storage Open	3-1
Play	Playback mode on	3-5
No Print	No Print mode on	4-19
Caps	Caps on	1-15
1, 1½, 2, 3	Line Spacing	1-14
Indicator Blinking		
ARtn	Justification on or Column Layout on	4-5 2-16
Lang	Select Alternate Keyboard	2-23
Store	Storage Full Warning	3-17
Play	Printwheel pitch change or Stop Code	4-2 4-1
No Print	Find on	4-22
Caps	Shift Lock on	1-15
Play and Lang	Play stopped for keyboard change	4-2
1, 1½	Draw on	2-7
1, 1½, 2, 3	Low Battery	6-12
3	Saving Energy (PowerWise Mode)	1-21
Note: For other sequences of blinking indicator lights, see "Problem Determination" on page 7-1.		

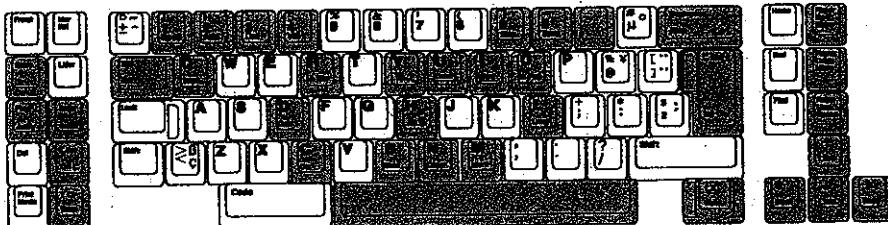
Code Key

The keys with green lettering (shaded in the chart below) are used in combination with the **Code** key to print special characters and turn special functions on and off. You can also use the **Spacebar**, **Paper**, **Bail Load Lever**, and **Hyphen (-)** key with the **Code** key.

U.S. Keyboard



United Kingdom Keyboard



To use these key combinations, press and hold down **Code** while you press the function key.



Function
Key

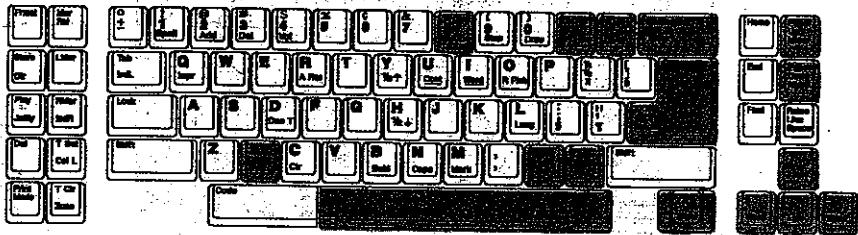
Important: If you accidentally enter a function, repeat the action to turn the function off. If you do not know which keys you pressed:

1. Check indicator panel for a solid or blinking indicator.
2. Find the indicator in the table on page 1-7.
3. Go to the page listed and follow the instructions for turning the function off.

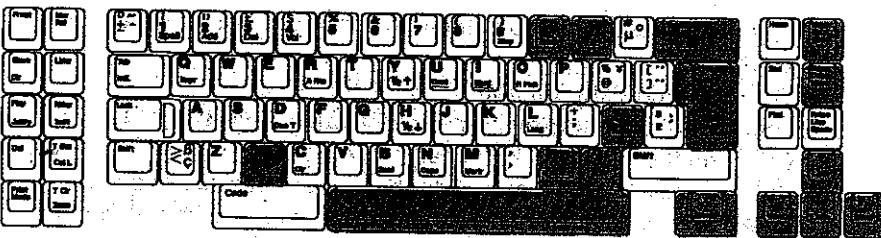
Typematic (Repeat) Keys

Typematic keys have both a single and *repeat* action. Press the desired typematic key once for a single action or hold the key down for repeat action. Typematic keys are shaded in the chart below.

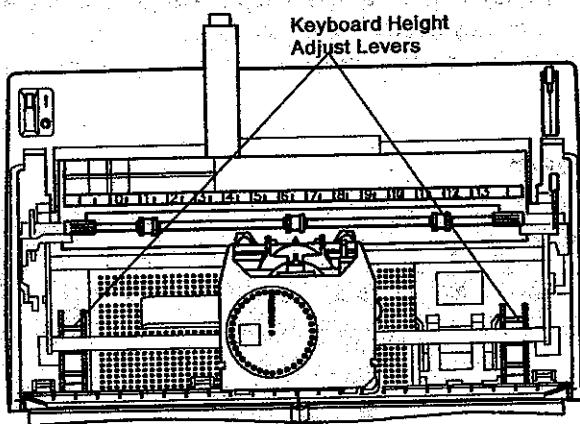
U.S. Keyboard



United Kingdom Keyboard



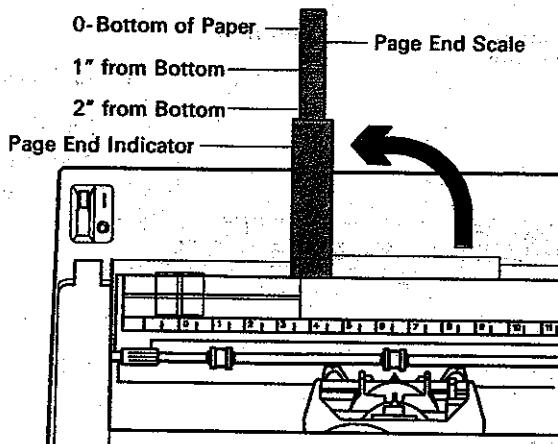
Keyboard Height Adjust Levers



Use the keyboard height adjust levers to raise or lower the keyboard to a comfortable position.

1. Use the Spacebar to move the carrier to the center of the typewriter.
2. Turn the typewriter off and raise the top cover.
3. Locate the two blue keyboard height adjust levers inside the typewriter on the right and left sides of the bottom panel.
4. Push the levers down and slide them to the desired position. There are three positions: *low* (levers all the way back), *medium* (levers in the middle), and *high* (levers all the way forward).
5. Lock both levers into the same position.

Page End Indicator and Scale

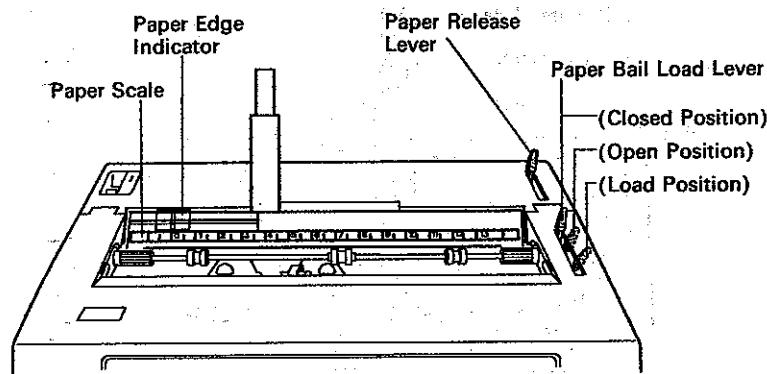


Raise the page end indicator until it is straight up and pull the page end scale out until it locks into place.

As you type, the top edge of the paper moves up to the lines on the scale. The left scale tells you approximately how much space remains to the bottom of 11 inch (279mm) paper. The left side of the scale is marked in inches.

The right side is marked in centimeters and calibrated for A4 size paper. The right scale tells you approximately how much space remains to the bottom of 297mm (11.7 inch) paper.

Inserting and Removing Paper



Inserting Paper

Use the **Paper Ball Load Lever** to load paper semiautomatically. The lever has three positions: closed, open, and load.

1. Turn the typewriter on.
2. Push the **Paper Release Lever** all the way back.
3. Align the center of the paper edge indicator with the vertical line to the left of zero on the paper scale.
4. Align the left edge of the paper with the vertical line in the center of the paper edge indicator.
5. Pull the **Paper Ball Load Lever** to the load position. When the paper begins to feed, release the **Paper Ball Load Lever**. The paper feeds to the top margin position.
6. Push the **Paper Ball Load Lever** back until it holds the paper against the platen.

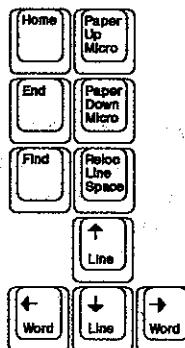
You can also use the **Paper Ball Load Lever** to change the top margin setting. See "Changing the Top Margin" on page 2-5.

Removing Paper

1. Pull the **Paper Ball Load Lever** to the open position.
2. Pull the **Paper Release Lever** toward you, then lift the paper out of the typewriter.
3. Push the **Paper Release Lever** and **Paper Ball Load Lever** back to the closed position.

Paper and Carrier Movement Keys

The paper and carrier movement keys allow you to move rapidly from one point to another. You now have the advantage of express movement both right and left as well as up and down on a page.



To move the paper:

- Press **Paper Up** or **Paper Down** to move paper one-half line. Hold down **Paper Up** or **Paper Down** to move quickly up or down the page.
- Hold down **Code** while you press **Paper Up (Micro)** or **Paper Down (Micro)** to move paper one micro-index (1/48 in) for precise alignment.
- Press **↑** or **↓** to move paper the number of lines determined by the line space setting. Hold down **↑** or **↓** to move quickly from line to line on a page.
- Hold down **Code** while you press **↑ (Line)** or **↓ (Line)** to move from the current line, across blank space on the page, to the next line of existing text.

To move the carrier:

- Press **←** or **→** to move across the current line. Hold down **←** or **→** to move quickly across a line.
- Hold down **Code** while you press **→ (Word)** to move to the next word.
- Hold down **Code** while you press **← (Word)** to move to the previous word.

Relocating Last Position

If you have moved the carrier to previously typed text, press **Reloc** (Relocate) to return to the last typing position. You can now continue typing.

Line Space Key

To set line spacing, hold down **Code** while you press **Reloc** (Line Space) until the desired Line Space indicator comes on. You can set the line spacing to 1, 1½, 2, or 3. The line space setting is saved when you turn the typewriter off.

Impression Control

You can set the impression control to one of three settings to suit your typing needs. To set the impression control, hold down **Code** while you press **Q** (Impr) until the desired setting is selected.

- The **1 Line Space** indicator comes on to indicate *light* impression.
- The **2 Line Space** indicator comes on to indicate *normal* impression.
- The **3 Line Space** indicator comes on to indicate *heavy* impression.

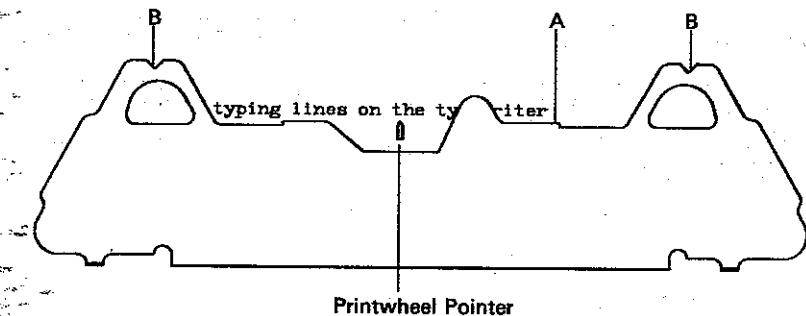
Type with the impression set at 1 to achieve the highest quality corrections, or change the setting to 3 to type carbon copies. When you turn the typewriter on, the impression control is automatically set to *normal*.

Cardholder

The cardholder holds paper, cards, and envelopes against the platen.

The printwheel pointer shows where the next character will print.

The portion (A) at the top of the cardholder indicates the base of the typing line. As the typewriter prints, the bottom of each character rests just above the line.



Use the notches (B) to draw vertical lines. Move to the point where you want to draw a line, then hold a pencil against one of the notches while pressing **Paper Up**, **Paper Down**, **↑**, or **↓** to move the paper. Also see "Draw" on page 2-7.

Caps Key

When Caps is on, *only* alphabetic characters (a through z) are capitalized. All other characters print in lowercase.

Hold down **Code** while you press **N (Caps)** to turn Caps on or off. The Caps indicator comes on when Caps is on.

Shift and Lock Keys

Use the **Shift** or **Lock** key to type all characters in uppercase. **Lock** allows you to type continuously in uppercase without pressing **Shift** for each capital letter.

1. Press **Lock** to type in uppercase. The Caps indicator blinks.
2. Press either **Shift** key to return to normal typing. The Caps indicator goes off.

Automatic Pitch Selection

The typewriter automatically selects the correct pitch when you install a printwheel. Pitch determines the number of characters typed per horizontal inch.

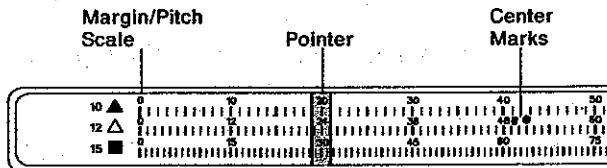
Pitch (Type Size)	Characters Per Inch	Pitch Symbol	Print Example
10P (Pica)	10	▲	This is a sample.
12P (Elite)	12	△	This is a sample.
PS (Proportional Spacing)	Varies in Width	●	This is a sample.
15P (Micro Elite)	15	■	This is a sample.

A 10-, 12-, or PS-pitch printwheel prints six lines per vertical inch. A 15-pitch printwheel prints eight lines per vertical inch.

Margin/Pitch Scale

The typewriter has three margin scales: 10 ▲, 12 △, and 15 ■. Use the scale line that matches the pitch symbol on your printwheel.

When using a PS ● printwheel, use the margin scale for 12 △ pitch.



An orange pointer moves along the margin/pitch scale to show where the next character will print. The margin/pitch scale also contains centering marks. When the left paper edge lines up with zero on the margin/pitch scale:

- marks the approximate center of paper 8.50 in (215.90 mm) wide.
- marks the approximate center of paper 210 mm (8.27 in) wide.

Margins

To set the left margin, move the carrier to the desired left margin position, then press **LMar**. The printwheel spins.

To set the right margin, move the carrier to the desired right margin position, then press **RMar**. The printwheel spins.

To release the left margin so you can move to the *left* of the margin, return the carrier to the left margin, then press **MarRel**. The printwheel spins.

Margins are saved when your typewriter is turned off.

Note: If the **ARtn** indicator is *not* on, the typewriter beeps approximately five spaces before the carrier reaches the right margin. See "Automatic Carrier Return" on page 2-1 and "Variable Right Margin Zone" on page 2-2.

Tabs

To set a tab, move the carrier to the desired tab position, then press **TSet**. The printwheel spins when the tab is set. You can set up to 26 tab positions. Tabs are saved when your typewriter is turned off. Permanent tabs exist at the left and right margins. You cannot clear these tabs.

To clear a tab, press **Tab** to move to the tab stop you want to clear, then press **TClr**. The printwheel spins.

To clear *all* tabs, hold down **TClr** while you press **CRtn**, then release the keys. The printwheel spins.

Erasing Automatically in 10, 12, and 15 Pitch

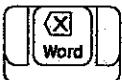
The typewriter has a correction memory that remembers approximately the last 4,000 characters (about one page). Correction memory allows you to easily and automatically erase and correct characters before you remove the paper.

After typing, proofread the page *before* you remove it from the typewriter. The correction memory is cleared if you:

- Turn the typewriter off.
- Use the **Paper Bail Load Lever**.
- Open storage.
- Use the **Mark** function.
- Print the directory.
- Print the formats.

Note: If you remove the paper from the typewriter, use the **Paper Bail Load Lever** to reinsert the paper for corrections. You must use manual erase as explained on page 1-19.

Erasing a Character



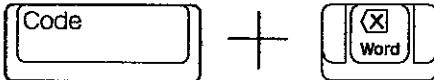
Correction
Key

- Press the **Correction** key once to erase one character.
- Hold down the **Correction** key to erase several characters.

If the typewriter does not automatically erase a character when you press the **Correction** key, you may be out of the correction memory. See "Erasing Manually in 10, 12, and 15 Pitch" on page 1-19.

Erasing a Word

Hold down **Code** while you press the **Correction (Word)** key to erase the entire word.



Erasing Manually in 10, 12, and 15 Pitch

To erase characters outside the correction memory:

1. Position the printwheel pointer at the last incorrect character in the word. Align the carrier on the line of type and not between the lines. Use **Code + Paper Up (Micro)** or **Code + Paper Down (Micro)** for precise vertical alignment. Use **Code + Backspace (Bksp 1)** for precise horizontal alignment.

You may need to erase one or several characters.

Position Printwheel Pointer Here

2. Press the **Correction** key and the printwheel spins.
3. Type the incorrect character. The character is erased, and the carrier moves one space to the left.
4. Repeat steps 2 and 3 to erase each incorrect character. Do not press **Backspace** when erasing.
5. Type the correct characters.

Helpful Hints

- If you are using a proportional spacing printwheel, see page 1-20.
- Turn **Bold Print** on to manually erase bold text.
- Turn **Continuous Underline** on to manually erase underlined text.
- When manually erasing a word, always erase from right to left.

Inserting an Extra Character

1. Move the carrier to the incorrect word and erase it entirely.
2. Hold down **Code** while you press **Backspace (Bksp 1)** two or three times to move the carrier back two or three micro units of space.
3. Type the correct word.

Practice

Type the first line of the example exactly as printed below. Follow the steps above to insert the 't' in the word 'should'.

The quick brown fox
should jump over the lazy dog.

Erasing in Proportional Spacing (PS)

Read this section *only* if you are typing with a proportional spacing (PS) printwheel.

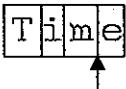
In 10, 12, or 15 pitch, all characters take up the same space; for example, an *i* takes up the same space as an *m*. In *proportional spacing*, the space allotted to each character depends on its width in units. For example, a lowercase *m* is seven units wide and a lowercase *i* is three units wide.

In proportional spacing, it is usually easier to erase the entire word containing an incorrect character, and then retype the word correctly. Use Word Erase (page 1-18) to erase an entire word quickly.

Erasing Manually in Proportional Spacing

1. Position the printwheel pointer at the left edge of the *last character* in the incorrect word. See the printwheel pointer on page 6-1.

Example



Position the printwheel pointer here to erase the *e*.

2. Press the **Correction** key and the printwheel spins.
3. Type the character exactly as you typed it the first time. If the character does not erase completely, hold down **Code** while you press **Backspace (Bksp 1)** to reposition the printwheel pointer at the left edge of the *last character* in the word. Repeat steps 2 and 3.
4. Press the **Correction** key, then type the previous character in the word. The carrier backs up and erases the character.
5. Repeat step 4 for each character in the word, then type the correct characters.

Notes:

- When using proportional spacing, do not type a lowercase letter *L* for the number *1*. Always use the number *1*.
- When manually erasing a word, always erase from right to left.

PowerWise Mode (U.S. Only)



Your typewriter conserves energy when the typewriter is ON but not in use. The typewriter reduces power consumption when inactive for more than a 10-minute time interval.

After the time interval, the typewriter blinks the **Line Spacing 3** light to show it is saving energy.

To continue typing, press any key.

To change the time interval, hold down **Code** while you press **X** followed by a number (1 through 90) to set the number of minutes.

To disable the PowerWise Mode, hold down **Code** while you press **X** followed by 0.

Examples:

Code + X + 3 sets the time interval to 3 minutes.

Code + X + 25 sets the time interval to 25 minutes.

Code + X + 0 disables the PowerWise Mode.

Helpful Hints

- The typewriter beeps if you enter a time interval greater than 90 minutes. The time interval will not change.

Note: The PowerWise Mode is available on typewriters with the U.S. Keyboard Layout (ID 001) shown on page 1-2.

Advanced Operations

Automatic Carrier Return

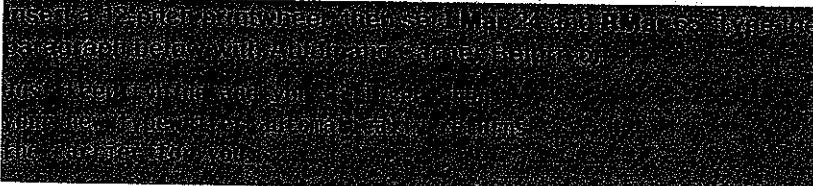
With Automatic Carrier Return on, the carrier automatically returns when you type a space followed by a character near the right margin. You do not have to press the **CRtn** (Carrier Return) key at the right margin.

Turn Automatic Carrier Return off when typing tables, columns, or forms.

Turning Automatic Carrier Return On and Off

Hold down **Code** while you press **R (ARtn)** to turn Automatic Carrier Return on or off. The **ARtn** indicator comes on when you turn Automatic Carrier Return on.

Practice



Helpful Hints

- The carrier does not return automatically if you type only spaces with the **Spacebar**, or if you type characters without spacing.
- Press **CRtn** to end a line *before* reaching the right margin.
- The carrier does not return automatically if text already exists on the following line, even though the **ARtn** indicator stays on.
- If you plan to revise later, turn Automatic Carrier Return on for all text except columns and tables. If Automatic Carrier Return is off when typing into storage, revised text will play back incorrectly.

Variable Right Margin Zone

The Variable Right Margin Zone function allows you to adjust the space before your carrier automatically returns with Automatic Carrier Return on. See "Automatic Carrier Return" on page 2-1. The standard right margin zone is 5 or 6 spaces, determined by your country keyboard. If you start an 8-letter word 6 spaces before the right margin your word will extend beyond the current right margin. By setting a new variable right margin zone, you can keep longer words from exceeding your right margin.

To adjust the variable right margin zone:

- Hold down **Code** while you press **TClr (Zone)** and type a number from 1 to 20. The number you type is the number of spaces in the variable right margin zone. The printwheel spins.
- To reset the variable right margin zone to the standard setting for the selected keyboard, hold down **Code** while you press **TClr (Zone)**. The printwheel spins.

Practice

Insert a 12-pitch printwheel, then set LMar=0 and RMar=45. Type the following sentence:

- With Automatic Carrier Return on (Standard, Sample Set, or 6), type the following sentence with your new typewriter:

Right Margin

Try using this function with your new typewriter.

With Automatic Carrier Return off (Standard, Sample Set, or 6), type the following sentence with your new typewriter.

Right Margin

Try using this function with your new typewriter.

With Variable Right Margin Zone set to 9, type the following sentence with your new typewriter.

Right Margin

Try using this function with your new typewriter.

With Variable Right Margin Zone set to 18, type the following sentence with your new typewriter.

Right Margin

Note: The current variable right margin zone remains active when you turn the typewriter off.

Formats — Margins, Tabs and Zones

The term **format** means a set of margins, tabs, and right margin zone. (For example: left margin 20; right margin 80; tabs 30, 40, 50 and 60; right margin zone 5). The Format function allows you to save margin and tab formats for different kinds of jobs in nine different format areas. Use these formats for jobs you type frequently, such as memos, reports, envelopes, and statistical charts:

Defining Format Settings

1. Hold down **Frm** while you type the number (1 through 9) of the desired format area. If you type an incorrect number, press **Frm** again, then type the correct number.
2. Release the keys, then change the margins, tabs, or right margin zone to the desired settings. The settings are automatically saved in the format area you selected.

Selecting a Format Area

1. Hold down **Frm** while you type the number (1 through 9) of the desired format area.
2. Release the keys.

Printing the Format

You may want to print a copy of your formats for reference. To print the formats:

1. Hold down **Frm** while you type 0.

When you release **Frm**, all nine formats are printed starting at the current left margin. The current format is printed in bold print. For example:

Margin Scale Pitch Reference

Format Number (1-9)

		Left Margin		Right Margin		Right Margin Zone Width	
12 P							
Format 1	LMar	12	RMar	62	Zone	5	
	Tabs	13 15 20	25 30				
Format 2	LMar	10	RMar	60	Zone	5	
	Tabs	11 15 22	25 30 50	55	60		
		
		
Format 9	LMar	0	RMar	62	Zone	5	
	Tabs	1 6 16	25				

Formats you have not set print with the standard values:

- Left Margin at carrier left limit
- Right Margin at carrier right limit
- Variable Right Margin Zone at 5 or 6
- No Tabs.

2. Press any key to stop printing. The typewriter completes printing the current line.

Note: Printing formats clears the correction memory.

Helpful Hints

- Formats are saved when you turn the typewriter off.
- The current format remains active when you turn the typewriter off.
- Temporary left and right margins are not saved with formats and are cleared when a format is selected.
- Left and right margins act as permanent tab stops and cannot be cleared. See "Margins" on page 1-17.
- Use the 12 pitch margin scale for proportional spacing.

Practice

Store the following formats as explained above. You will use these formats in practices later in this module.

Format Area 1: LMargin 12 RMargin 62 Tab 15

Format Area 2: LMargin 12 RMargin 65 No tab

Format Area 3: LMargin 12 RMargin 44 No tab

Format Area 4: LMargin 12 RMargin 68 Tab 15

Changing the Top Margin

When you insert paper, it feeds to the top margin position (first writing line). You can change the position of this top margin.

1. Use the **Paper Ball Load Lever** to insert a sheet of paper. An incorrect top margin position will result if you do not use the **Paper Ball Load Lever**.
2. Position the paper at the desired new first writing line.
3. Hold down **Code** while you pull the **Paper Ball Load Lever** forward. The printwheel spins as the top margin is set.
4. Push the **Paper Ball Load Lever** all the way back and release **Code**. The new top margin is saved when you turn the typewriter off.

Note: To reset the top margin to 1 inch, hold down **Code** and **Shift** while you pull the **Paper Ball Load Lever** forward.

Required Space and Required Hyphen

Use required spaces or required hyphens near the right margin if you do not want Automatic Carrier Return to break the text you are typing. For example, use required spaces or hyphens when typing names, dates, or certain numbers that must stay on the same line.

- Hold down **Code** while you press **Spacebar** to type a required space.
- Hold down **Code** while you press - (hyphen) to type a required hyphen.

Practice

Open one of the sample files you chose earlier, save it as saved on page 2-5 (LMC12-HV15-42). Use the examples below as a reference for the keyboard.

Words typed with required spaces:

Code ← Spacebar → Code ← Spacebar →

John Doe 123 Main Street 15 January 22 1999

Right Margin

Words typed with required hyphens:

Bolt's employee number is 123-
436-789

Words typed with required hyphens:

Code ← → (hyphen) → Code ← → (hyphen)

Bolt's employee number is 123-436-789

Right Margin

Underlining

Continuous Underline

1. Hold down **Code** while you press **U (Cont)** to begin underlining. The **Cont** indicator comes on.
2. Type the text you want underlined. All words and spaces are underlined as you type.
3. Hold down **Code** while you press **U (Cont)** to end underlining. The **Cont** indicator goes off.

Word Underline

1. Type the word you want underlined. Do not type the space following the word.
2. Hold down **Code** while you press **I (Word)**. Word Underline goes off after underlining the word.
3. Type the space following the word and repeat the steps for each word you want underlined.

Note: To underline previously typed words that are still in the correction memory, use **Backspace**, **←**, or **↑** to return to the words, then hold down **Code** while you press **I (Word)** to underline the words.

Draw

Use the Draw function to draw a box, horizontal lines or vertical lines.

1. Move the carrier to the starting position of the box or line using any of the following keys:
 - carrier movement (**↑**, **↓**, **←**, **→**)
 - carrier return
 - paper movement (**Paper Up**, **Paper Down**)
 - backspace
 - unit backspace
 - spacebar.
2. At the point where you want to begin drawing, hold down **Code** while you press **0 (Draw)**. The printwheel spins. The **1** and **1½** line space indicators blink.
3. Move the carrier to the end position of the box or line and again hold down **Code** while you press **0 (Draw)**.
4. The typewriter draws the box or line. The **1** and **1½** line space indicators go off.

The typewriter determines whether to draw a line or box from the indicated starting and ending positions:

- A horizontal line from the starting to ending position if both positions are on the same horizontal line
- A vertical line from the starting to ending position if both positions are on the same vertical line

Start (Code + Draw)



End (Code + Draw)

←Start (Code + Draw)

← End (Code + Draw)

- A box if there are differences in both the horizontal and vertical positions of the starting and ending points.

Start (Code + Draw) →



← End (Code + Draw)

When you use the Draw function, standard characters are the underscore graphic (—) for horizontal lines and the exclamation point graphic (!) for vertical lines.

When the U.S. Draw (009) printwheel is installed (see "Using Alternate Keyboards" on page 2-21), you can print boxes with connected corners. The standard characters are the underscore (—) graphic for horizontal lines and the vertical bar (!) graphic for vertical lines.

Changing the Draw Character

To change the Draw standard characters (for either printwheel):

1. Move the carrier to the starting position of the box or line and hold down **Code** while you press **0 (Draw)**. The printwheel spins. The **1** and **1½** line space indicators blink.
2. Type a graphic. The character you type will be used for both the horizontal and the vertical line graphic.

*****	*
*	*
*****	*

3. Move the carrier to the end position of the box or line and again hold down **Code** while you press **0 (Draw)**.
4. The typewriter draws the box or line. The **1** and **1½** line space indicators go off.

Note: The substitute character must be selected each time the Draw function is entered. Otherwise the standard characters for the current printwheel are used.

Note: Lines and boxes created using the Draw function cannot be erased automatically, and Draw cannot be used when storage is open.

Cancelling Draw

Draw can be cancelled at any time by pressing the **Correction** key.

Centering

Centering between Margins

1. Set margins, then move the carrier to the left margin.
2. Hold down **Code** while you press **C (Ctr)**. The carrier centers between the margins.
3. Type the text. The carrier backs up but does not print.
4. Hold down **Code** while you press **C (Ctr)** to print the text.

Centering at Any Point on a Line

1. Move the carrier to the desired center point.
2. Hold down **Code** while you press **C (Ctr)**.
3. Type the text. The carrier backs up but does not print.
4. Hold down **Code** while you press **C (Ctr)** to print the text.

Note: The typewriter prevents you from typing over previously typed text, and beeps each time you press a keybutton.

Helpful Hints

- Pressing **CRtn**, **Tab**, or **DecT** also causes text to print.
- Press the **Correction** key until the carrier stops moving forward to cancel centering before the text prints.
- Use the **Center** and **Underline** functions together to center and underline text at the same time.
- The **Paper Up**, **Paper Down**, **↑**, **↓**, and **Backspace** keys do not work while Centering is on.
- The **Center** Function cannot be used in **No Print** mode.

Right Flush

Use Right Flush to type text with an even (flush) right margin.

Example

XYZ Corporation
740 Anytown Road
Anytown, KY 00110

Typing Text Flush to the Right Margin

1. Set left and right margins, then move the carrier to the left margin.
2. Hold down **Code** while you press **O (RFish)**.
3. Type the text. The carrier backs up but does not print.
4. Hold down **Code** while you press **O (RFish)**. The text aligns and prints to the right margin.

Typing Text Flush Right to Any Point on a Line

1. Move the carrier to the point where you want to align the text.
2. Hold down **Code** while you press **O (RFish)**.
3. Type the text.
4. Hold down **Code** while you press **O (RFish)**. The text aligns and prints to the selected point.

Helpful Hints

- The rightmost character prints *one space to the left* of the right margin or right flush point.
- Text does not appear right aligned if you type a space after the last character.
- Press the **Correction** key until the carrier stops moving forward to cancel Right Flush before the characters print.
- Use the Right Flush and Underline functions together to type text aligned right flush and underlined at the same time.
- The typewriter prevents you from typing over previously typed text, and beeps each time you press a keybutton.
- The **Paper Up**, **Paper Down**, **↑**, **↓**, and **Backspace** keys do not work while Right Flush is on.
- The Right Flush Function cannot be used in No Print mode.

Subscripts and Superscripts

Subscripts print *below* the typing line (for example, CuSO₄). Superscripts print *above* the typing line (for example, Happy Living⁵).

Typing Subscripts

Hold down **Code** while you press **H** ($\frac{1}{2} \downarrow$). The paper moves one-half line below the typing line. Type the subscript character and the paper moves back to the typing line.

Typing Superscripts

Hold down **Code** while you press **Y** ($\frac{1}{2} \uparrow$). The paper moves one-half line above the typing line. Type the superscript character and the paper moves back to the typing line.

Helpful Hints

- Do not use the paper movement keys to type subscripts or superscripts. If you do, Automatic Carrier Return does not work on lines where the **Paper Up (Micro)** and **Paper Down (Micro)** keys are used.
- You cannot underline subscripts and superscripts automatically. You can underline them manually using the **Underline/Hyphen Key**.

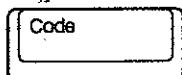
Bold Print

Hold down **Code** while you press **B (Bold)** to turn Bold Print on or off. The **Bold** indicator comes on when Bold Print is on. Text prints in bold as you type.

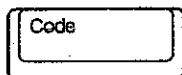
Note: You can use Bold Print in centered, decimal tab and right flush text. For recommended readability in Bold Print, see "Printwheel Application Recommendations" on page 6-7.

Special Characters (U.S. Keyboard Only)

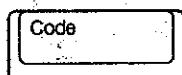
Using **Code** key combinations, you can type four special characters without changing the printwheel.



A section symbol (§) prints.



A paragraph symbol (¶) prints.



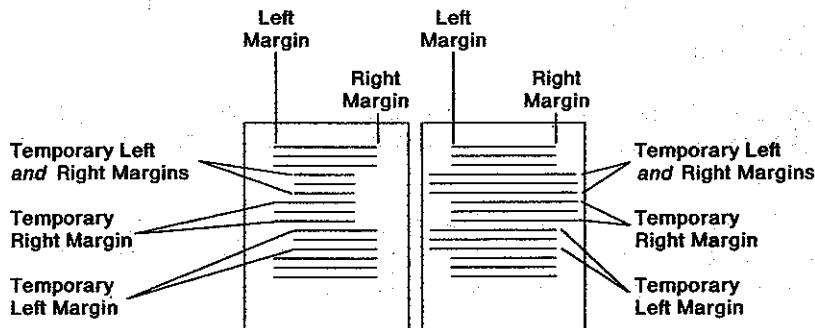
An exponent (²) prints.



An exponent (³) prints.

Indenting

The **Indent** function allows you to set temporary left or right margins, either inside or outside the current margins. The temporary margins remain active until you clear the **Indent** function.



1. Type until you reach the *first* line you want indented.
2. To set a temporary left margin:
 - a. Move the carrier to the desired position.

- b. Hold down **Code** while you press **Tab** (**IndL**). The printwheel spins.
- 3. To set a temporary right margin:
 - a. Use the **Spacebar** to move to the desired position.
 - b. Hold down **Code** while you press **RMar** (**IndR**). The printwheel spins.
 - c. Hold down **←** to move to the left margin.
- 4. Type the indented lines.
- 5. When you finish typing the indented lines, hold down **Code** while you press **CRtn** (**IndClr**) to clear the temporary margins.

Practice

From the command center, Return On and Insert a 12-pitch dot matrix field, then choose form 1, area 2, as saved on page 2-12. (Mar=12, RMar=55). Follow the steps on the previous page to type the practice below.

Your new type parameters designed to include temporary left and right margins.

Temporary Left Margin and Temporary Right Margin

For example, you can set a temporary left margin of 12 dots and a temporary right margin of 55 dots without using the **Spacebar**. When you want to indent lines of text, type:

Code + CRtn

Reviewing temporary left and right margins from a previous lesson, answer the following questions.

CRtn

Decimal Tabulation

Use the Decimal Tab function to type numbers in vertical columns, aligning the numbers on decimal points or at the column's right edge.

Set Tab Here Set Tab Here Set Tab Here Set Tab Here

234.56	456.79	1.32	1.50
2.87	20.13	.5	45.67
26,745	87,453	873	5%
387	3,498	34	234-

Typing Numbers with Decimals

1. Turn Automatic Carrier Return off.
2. Set a tab for each column, then move to the left margin.
3. Hold down **Code** while you press **D (DecT)** to move to the first tab stop.
4. Type the numbers *up* to the decimal point. The carrier backs up but does not print.
5. Type the decimal point. The numbers and the decimal point print.
6. Type any numbers or characters that follow the decimal point.
7. Hold down **Code** while you press **D (DecT)** to move to the next column.
8. Repeat steps 4 through 7 for each column. Press **CRtn** after the last column at the end of each line.

Typing Numbers without Decimals

1. Repeat steps 1 through 3 above.
2. Type the number and any characters which follow it. The carrier backs up but does not print.
3. Hold down **Code** while you press **D (DecT)**. The text prints and the carrier moves to the next decimal tab position.

Pressing **CRtn** or **Tab** also causes text to print. If you press **CRtn**, the text prints and the carrier returns to the left margin. If you press **Tab**, the text prints and the carrier moves to the next tab position. Hold down **Code** while you press **D (DecT)** to move the carrier to the *next* tab position for decimal tabulation.

4. Repeat steps 2 and 3 for each column. Press **CRtn** after the last column at the end of each line.

Helpful Hints

- The **Paper Up (Micro)**, **Paper Down (Micro)**, **↑**, **↓**, and **Backspace** keys do not work while using Decimal Tab. The typewriter beeps when you press one of these keys.
- To cancel the Decimal Tab function before the number prints:
 1. Press the **Correction** key until the carrier stops moving forward.
 2. Press **Tab**, **Spacebar**, **Backspace**, or **CRtn**.
 3. The Decimal Tab Function cannot be used in No Print mode.

Underlining Numbers in a Column

1. Before typing the *last line* of the columns, hold down **Code** while you press **U (Cont)** to turn Continuous Underlining on.
2. Hold down **Code** while you press **D (DecT)** to move to the first tab stop.
3. Press **Spacebar** to type any underlined spaces in front of the number.
4. Type the number.
5. Hold down **Code** while you press **D (DecT)** to move to the next column.
6. Repeat steps 3 through 5 for each column.
7. Hold down **Code** while you press **U (Cont)** to turn Continuous Underlining off.

Double Underlining Numbers in a Column

1. Repeat steps 1 through 7 above for the first underline.
2. Press **CRtn** after the last number.
3. To position the paper, press **↑ once**, then hold down **Code** while you press **Paper Up (Micro)** **twice**.
4. Move the carrier to the position where Underlining begins, then hold down **Shift** while you press — (underscore) repeatedly to underline the numbers.
5. Repeat step 4 for each column.
6. Hold down **Code** while you press **↑ (Line)** to realign to the previous typing line.
7. Press **CRtn**.

Double Underlining Using Keyboard 117

Install the U.S. Accounting printwheel for Keyboard 117.

1. Hold down **Code** while you press **L (Lang)**, release **L**, and continue to hold down **Code** while you type **117**. The **Lang** indicator comes on. Refer to Keyboard ID 117 on 2-31.
2. Type the text to be double underlined.
3. Move the carrier to the position where Underlining begins.
4. Hold down **Code** while you press **] (=)** once for each character or space to be underlined. The double underscore symbol () is printed when you double underline a space.
5. Repeat steps 3 and 4 each time double underline is needed.
6. Hold down **Code** while you press **L (Lang)** to return to your primary keyboard. The **Lang** indicator goes off.

Column Layout

Use the Column Layout function to type information in multiple columns without counting characters or measuring the space between columns. The first column starts at the left margin, and the last column ends at the right margin. Existing tabs are cleared and new tabs are set for equal spacing between the columns. The **ARtn** indicator blinks when using Column Layout.

Using Column Layout for Text

1. Set left and right margins at the appropriate locations to define the width of the column layout.
2. Move the carrier to the left margin, then hold down **Code** while you press **TSet (Col L)**. The printwheel spins and the **ARtn** indicator blinks.
3. To set the maximum width of the column, type the longest item in the column. The carrier moves but does not print.
4. Press **Tab** to mark the end of the column and to indicate that the text will be left-aligned. The printwheel spins.
5. Repeat steps 3 and 4 for each column.
6. When you have set the widths of all columns, hold down **Code** while you press **TSet (Col L)** to exit Column Layout mode. The **ARtn** indicator returns to its state prior to starting Column Layout.
7. Type the columns, pressing **Tab** to move the carrier to the next column.

Practice 1 (Text)

User 1200001, then set Variable Register 0 (Code) to define following:

1. Press Code + TSet (Col L)
2. Type San Francisco, then press tab
3. Type New York, then press tab
4. Type London, then press tab
5. Press Code + TSet (Col L)
6. Type the following tab between entries and press CR after each line.

This first column starts at the left margin. Dates are shown below:

1988-02-12	1988-03-13	1988-04-14
New York, NY	San Francisco, CA	London, England
San Francisco, CA	London, England	New York, NY

Using Column Layout for Numbers

1. Set left and right margins at the appropriate locations to define the width of the column layout.
2. Move the carrier to the left margin, then hold down **Code** while you press **TSet (Col L)**. The printwheel spins and the **ARtn** indicator blinks.
3. To set the maximum width of the column, type the longest number left of the decimal point, the decimal point, then the longest number right of the decimal point.
4. Hold down **Code** while you press **D (DecT)** to mark the end of the column and to indicate that the entry will be right-aligned. The printwheel spins.

Note: If there is a decimal in the number, the machine will correctly place the tab at the decimal point.

5. Repeat steps 3 and 4 for each column.
6. When you have set the widths of all columns, hold down **Code** while you press **TSet (Col L)** to exit Column Layout mode. The **ARtn** indicator returns to its state prior to starting Column Layout.
7. For each column of numbers, press **Code + D (DecT)** and type the numbers.

Practice 2 (Numbers)

Instead of pressing **TSet (Col L)** after **Margin**, press **Shift + Margin** to set the margins.

- 1 Press **Code + TSet (Col L)**.
- 2 Type 123.456 then press **Code + D (DecT)**.
- 3 Type 789 then press **Code + D (DecT)**.
- 4 Type 098765 then press **Code + D (DecT)**.
- 5 Press **Code + TSet (Col L)**.
- 6 Press **Code + D (DecT)** for each column of numbers and type the numbers. Press **CRtn** at the end of each line.

The last column ends at the right margin. Decimal tabs are set as shown below:

Margin	Margin	Margin	Margin
123.456	789	098765	
			123.456
			789
			098765

Helpful Hints

- The following keys are valid in Column Layout:
 - letters
 - numbers
 - **Spacebar**
 - **Correction**
 - **Code + Correction (Word)**
 - **Tab**
 - **Code + D (DecT)**
 - **Code + TSet (Col L)**
 - **CRtn**All other keys are invalid.
- A beep sounds if your columns exceed the width of the margins. To decrease the width of the last column, press the **Correction** key. To increase the width of the margins, hold down **Code** while you press **TSet (Col L)** to exit Column Layout mode, reset the margins, and begin again.
- Use **Code + Correction (Word)** to erase an entire column entry.
- To cancel Column Layout without changing previous format settings, erase the entries in all columns.
- You can use the Indent function (page 2-12) to set a temporary margin.

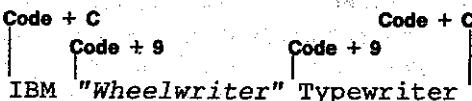
- When typing with a PS printwheel, add a few spaces to each column to allow for the varying character widths.
- The Column Layout Function cannot be used in No Print mode.

Changing Printwheels While Typing

You can use different printwheels while typing a job. The steps below explain how to change printwheels when you are using *Centering*, *Right Flush*, or *Decimal Tab*.

Using the Same Pitch with a Different Typestyle

Example (Changing Printwheels in Centered Text)



1. Hold down **Code** while you press **C (Ctr)** to begin centering.
2. Type *IBM* and one space.
3. Hold down **Code** while you press **9 (Stop)** to insert a stop code.
The printwheel spins.
4. Change the printwheel.
5. Type "*Wheelwriter*" and one space.
6. Hold down **Code** while you press **9 (Stop)**. The printwheel spins.
Change the printwheel.
7. Type *Typewriter*, then hold down **Code** while you press **C (Ctr)** to end centering.
8. When the typewriter prints it will stop at the stop code. Insert the correct printwheel.
9. Press **End** to print to the next stop code, then repeat step 8.
10. Press **End** to print the rest of the text.

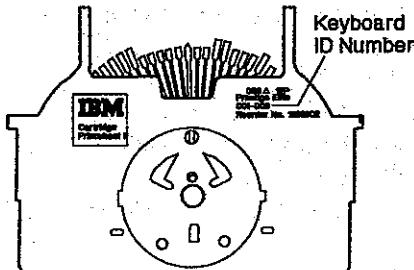
Alternate Keyboards

Your typewriter has primary and alternate keyboards. You have already been using your primary keyboard. The primary keyboard allows you to type in your own language. The typewriter automatically sets your primary keyboard to match the keybuttons on your typewriter.

With alternate keyboards and the appropriate printwheels, you can type in other languages or use special application keyboards such as ASCII (PC) and Latin Supplemental ISO.

Matching Printwheels and Keyboards

Printwheels for alternate keyboards contain characters not printed on the typewriter keybuttons. A keyboard ID is printed on each printwheel; for example, the keyboard ID for the United States is 001 and for the United Kingdom is 067. When more than one set of numbers is shown, use the number with the keyboard in "Alternate Keyboard Cross-Reference" on page 2-24.



Using Alternate Keyboards

1. Select a keyboard for a country or special application from the charts on pages 2-25 through 2-33.
2. Insert the country or special application printwheel. Match the keyboard ID number from the chart to the number on the printwheel.
3. Hold down **Code** while you press **L (Lang)**, release **L (Lang)** and continue to hold down **Code** while you type the keyboard ID number. The **Lang** indicator comes on and the alternate keyboard is selected.
4. Use the keyboard chart that matches your keyboard ID to locate the characters you want to type.
5. Type the job. When you finish typing in the alternate keyboard, hold down **Code** while you press **L (Lang)**. The **Lang** indicator goes off and the primary keyboard is selected.
6. Remove the country or special application printwheel and install your primary printwheel.

A **secondary keyboard** is an alternate keyboard arrangement that is activated by a more convenient typing sequence of **Code + L(Lang)**. With this sequence, a keyboard ID is not typed and a pre-programmed alternate keyboard is activated.

Example: If you hold down **Code** while you press **L (Lang)** and do not type a keyboard ID number, Latin Supplemental ISO (Keyboard ID 099) is selected for the U.S.. Japan (English) (Keyboard ID 069) is selected for the United Kingdom.

Secondary Keyboard Assignments

Primary Keyboard	Secondary Keyboard
Adria (Latin) I 234	Yu (Cyrillic) 225
Adria (Latin) II 234	Germany 029
Bulgaria 227	Germany 029
Canada (Bilingual) 039	Canada (French) 037
Czech Republic 083	Russia 231
Greece (Greek) 219	Greece (Latin) 207
Hungary 109	Germany 029
Poland 215	Russia 231
Rumania 217	Russia 231
Russia 231	Germany 029
Slovakia 085	Russia 231
Switzerland (French) 049	Switzerland (Fr. y-z) 049S
United Kingdom 067	Japan (English) 069
All others	LSK 099

Helpful Hints

- The alternate keyboard charts show some keybuttons with special characters. See "Special Characters (U.S. Keyboard Only)" on page 2-12.
- The typewriter stops automatically for keyboard changes during playback. The **Lang** and **Play** indicators blink to signal an alternate keyboard and printwheel are required.
- Many alternate keyboards contain accent marks (dead keys) that print without advancing the carrier to the next space. To type accent marks over alphabetic characters:
 1. Type the accent mark. The carrier does not move.
 2. Type the alphabetic character.
- The **Lang** indicator blinks when the carrier is positioned over text of a different language. To overstrike a character using a different language, you must clear the correction memory by turning the machine off and then on again. You will not be able to automatically erase your original text when the correction memory is cleared.

Alternate Keyboard Cross-Reference

Keyboard Name	ID	Keyboard Name	ID
American Simplified	2	Netherlands	43
Australia	1	New Zealand	1
Austria	29	Norway	55
Belgium	251	Philippines	25
Brazil	61	Poland	215
Bulgaria	227	Portugal	63
Canada (Bilingual)	39	Rumania	217
Canada (English)	37	Russia	231
Czech Republic	83	Slovakia	85
Denmark	59	South Africa	81
Finland	53	Spain	70
France	251	Sweden	53
Germany	29	Switzerland (French)	49
Germany-East	34	Switzerland (German)	51
Germany (PC)	249	Symbol	201
Greece (Greek)	219	Trilingual	113
Greece (Latin)	207	Turkey	79
Hong Kong	119	United Kingdom	67
Hungary	109	United Kingdom (PC)	252
Italy	41	U.S.	1
Italy (PC)	247	U.S. Accounting	117
Japan (English)	69	U.S. ASCII (PC)	103
Japan (Katakana)	221	U.S. Draw	9
Latin America	25	Adria (Latin)	234
Latin Supplemental	99	Yu (Cyrillic)	225
Library	111		

Keyboard Charts

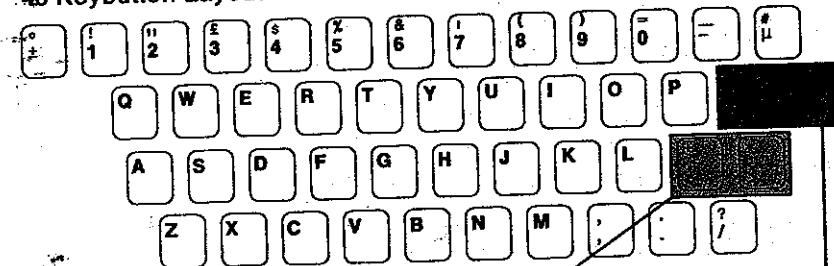
The keyboard charts show the keyboard ID numbers and character locations for each alternate keyboard. The charts are arranged numerically.

Keyboard Charts for Typewriters Without the U.S. Keyboard

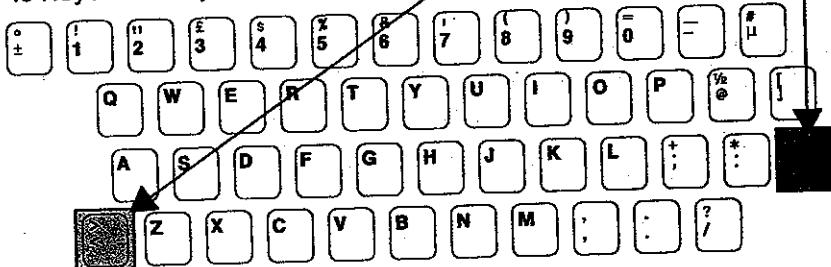
The keyboard charts beginning on the following page show the keyboard layout for the U.S. keyboard shown on page 1-2. This keyboard has 46 keybuttons. All other keyboards have 48 keybuttons.

If you have a 48 keybutton keyboard, use the following diagram as a guide to determine which characters appear on the two (2) additional keybuttons.

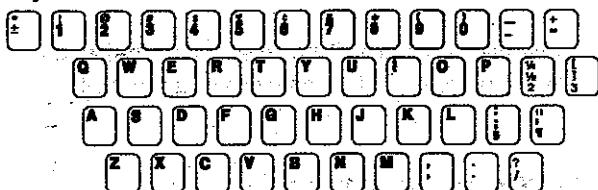
46 Keybutton Layout



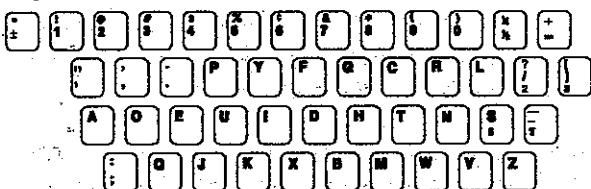
48 Keybutton Layout



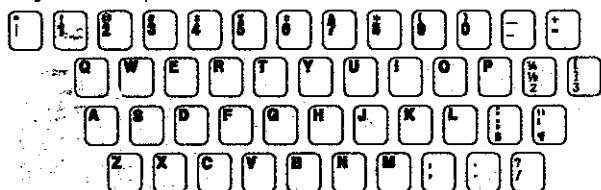
Keyboard ID 001 — Australia, New Zealand, United States



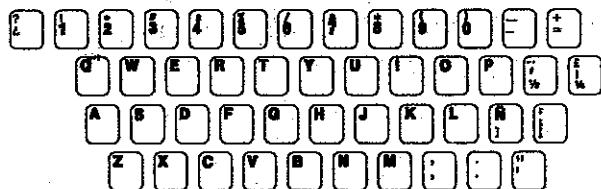
Keyboard ID 002 — American Simplified



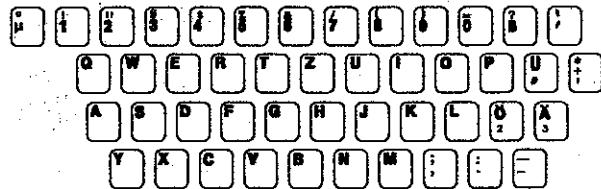
Keyboard ID 009 — U.S. Draw



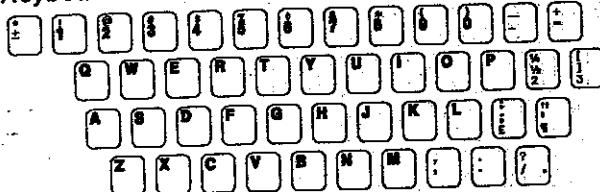
Keyboard ID 025 — Latin America, Philippines



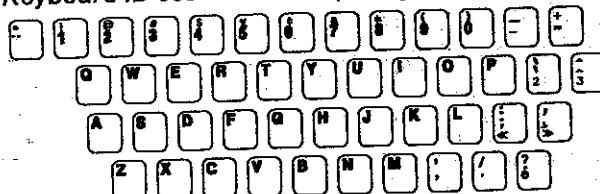
Keyboard ID 029 — Austria, Germany



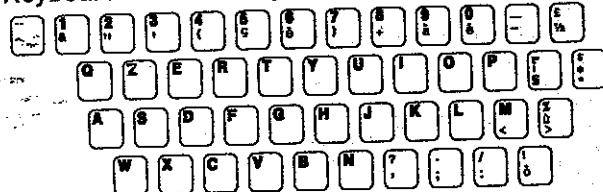
Keyboard ID 037 — Canada (English)



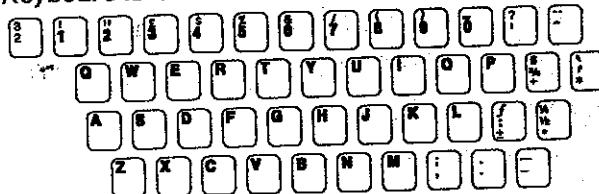
Keyboard ID 039 — Canada (Bilingual)



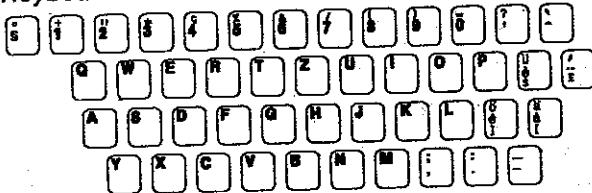
Keyboard ID 041 — Italy



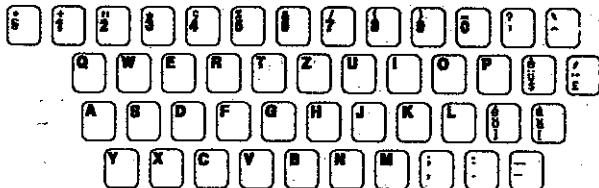
Keyboard ID 043 — Netherlands



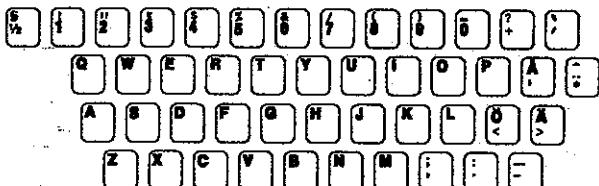
Keyboard ID 049 — Switzerland (French)



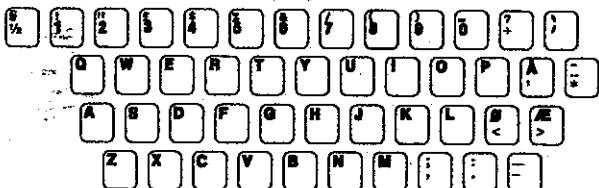
Keyboard ID 051 — Switzerland (German)



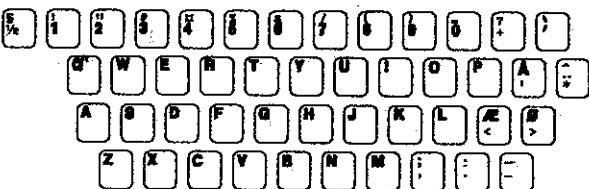
Keyboard ID 053 — Finland, Sweden



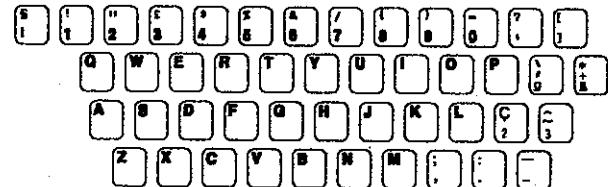
Keyboard ID 055 — Norway



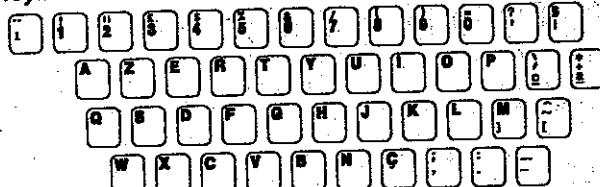
Keyboard ID 059 — Denmark



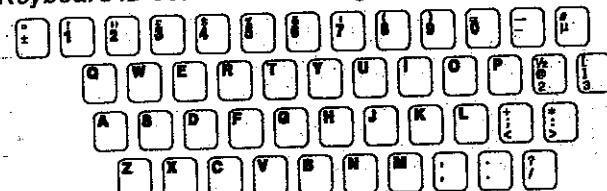
Keyboard ID 061 — Brazil



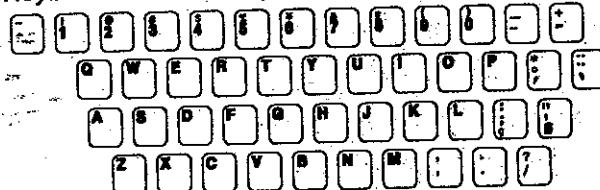
Keyboard ID 063 — Portugal



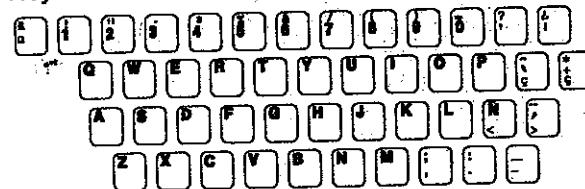
Keyboard ID 067 — United Kingdom



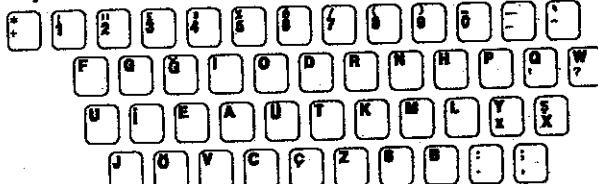
Keyboard ID 069 — Japan (English)



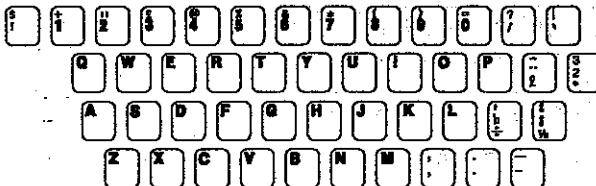
Keyboard ID 070 — Spain



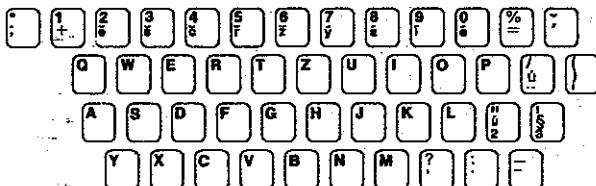
Keyboard ID 079 — Turkey



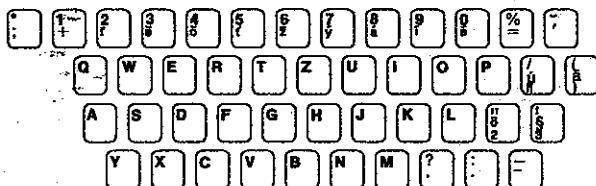
Keyboard ID 081 — South Africa



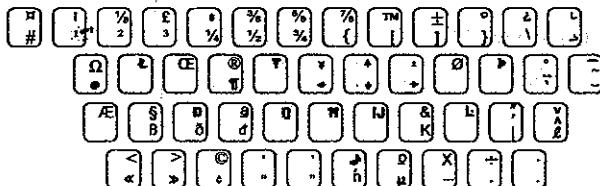
Keyboard ID 083 — Czech Republic



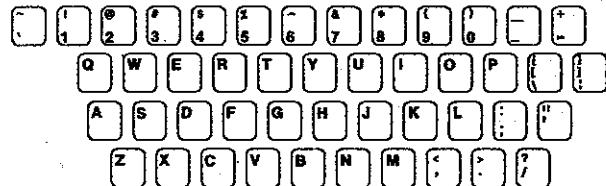
Keyboard ID 085 — Slovakia



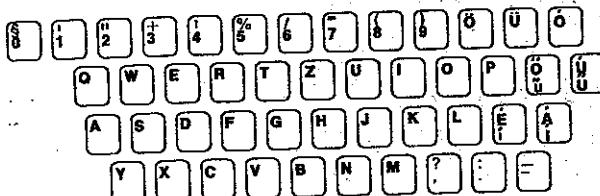
Keyboard ID 099 — Latin Supplemental ISO



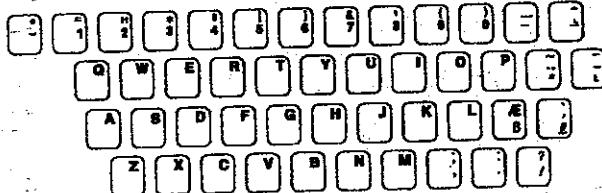
Keyboard ID 103 — U.S. ASCII (PC)



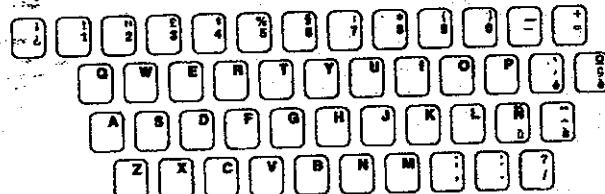
Keyboard ID 109 – Hungary



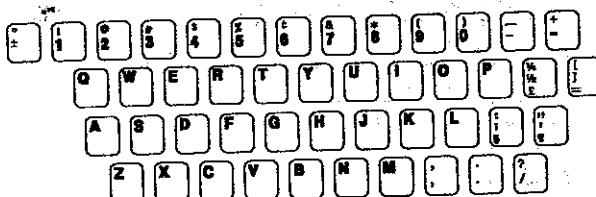
Keyboard ID 111 – Library



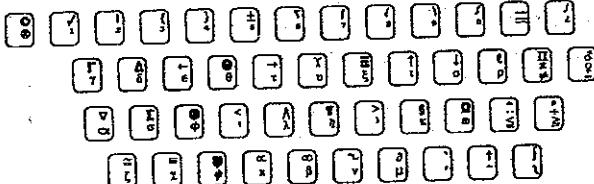
Keyboard ID 113 — Trilingual



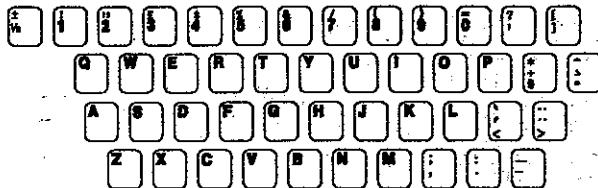
Keyboard ID 117 — U.S. Accounting



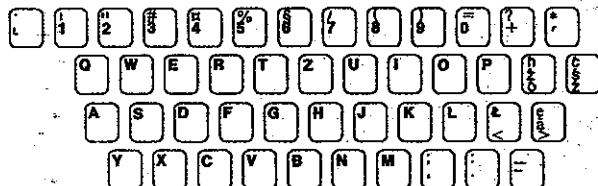
Keyboard ID 201 – Symbol



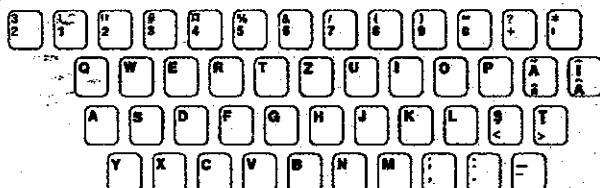
Keyboard ID 207 — Greece (Latin)



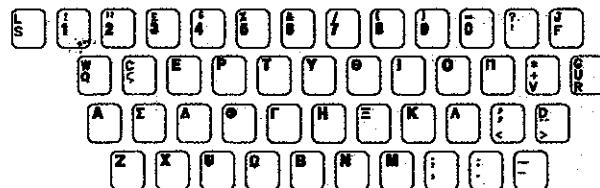
Keyboard ID 215 – Poland



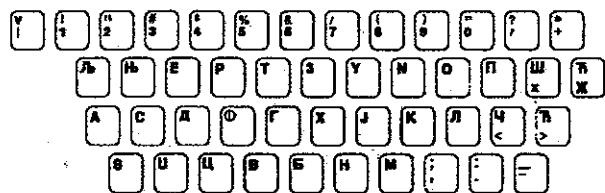
Keyboard ID 217 – Rumania



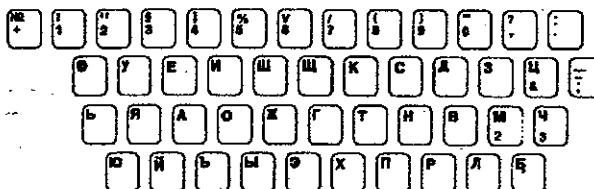
Keyboard ID 219 — Greece (Greek)



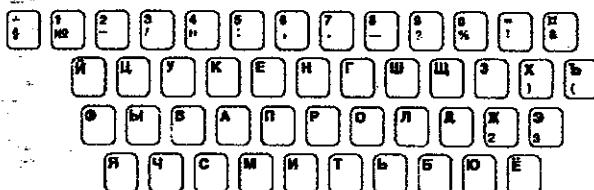
Keyboard ID 225 — Yu (Cyrillic)



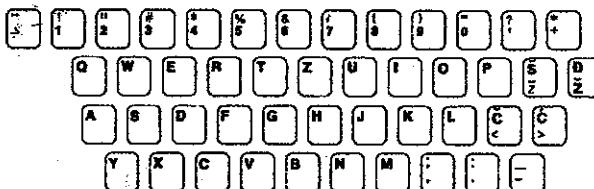
Keyboard ID 227 — Bulgaria



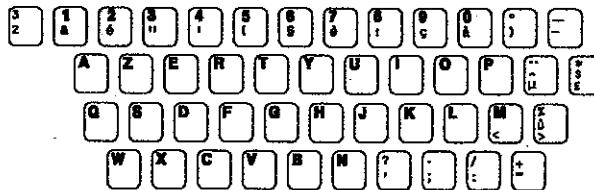
Keyboard ID 231 — Russia



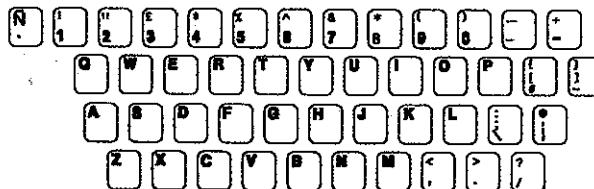
Keyboard ID 234 — Adria (Latin)



Keyboard ID 251 — Belgium, France



Keyboard ID 252 — United Kingdom (PC)



Basic Storage

You can store approximately 48,000 bytes (about 15 to 25 pages) in typewriter storage. The information you store is called a job. A job can be a word, line, sentence, paragraph, page or several pages. Some specific examples of a job may be a letter, will, statistical report, or the current date.

Note: Some character storage is used for other typewriter actions such as spacing, carrier returns, and document control functions.

Storage allows you to add, delete, or revise text later without retying the entire job. When you open storage, the **Store** indicator comes on and anything you type is stored. When you close storage, the **Store** indicator goes off.

Note: If the **Store** indicator is blinking quickly, the typewriter is searching memory. You should *not* perform any typewriter operation or turn the typewriter off until the indicator stops blinking.

Storing a Job

1. Always prepare the typewriter **before** you open storage: install the desired printwheel; insert paper; select the desired format (or set margins and tabs); and select line spacing.
2. Hold down **Store** while you type a number (1 through 99) to open a storage area. The number you type identifies the storage area you opened.
 - The **Store** and **ARtn** indicators come on.
 - If the **Play** indicator comes on, the storage area already contains text.
3. Type the job.
 - Leave Automatic Carrier Return on unless you are working with columns or tables. Use Stop Codes (see page 4-1) to remind you when to turn **ARtn** off or on within a job.
 - For jobs requiring margin changes, see "Margin and Tab Formats in Stored Jobs" on page 3-7.
 - Use the **Correction** key to correct errors you notice immediately, such as incorrect characters, spaces or carrier returns.

4. Press **Store** to close storage. Tabs, margins, and temporary margins are automatically stored with the job. The **Store** indicator goes off.

Note: If you use Automatic Carrier Return when storing and playing back a job, the line endings are adjusted when you make revisions. Use required hyphens and required spaces to keep phrases together on one line regardless of their position in the job; for example, *brother-in-law* and *January 22*.

Practice

1. Insert a 12-pitch printwheel, then choose formal area 2 (see page 2-5) (LM1140, RM1155).
2. Press and hold down **Store** while you type the number (1 through 99) where you want to Store the job:
 - a. Press **CR** (only at the end of the last line).
 - b. Only connect or disconnect immediately after the carriage return.In the following text, certain words are printed in bold. These words are marked by the beginning of a new line. This is a good way to indicate the evolution and the development of new technologies. Typing consists of two parts: the enthusiasm of spectators and provided free advertising for a struggling typewriter industry. In those days, typing speed was measured in words per minute. We're considered a slow typist if we can type 40 to 45 words per minute.
3. Press **Store** to close storage at the end of the paragraph.
4. Hold down **Play** while you type the number of the storage location to play back the job.

Helpful Hints

- When you close storage, the carrier moves to the left margin. If you did not press **CRtn** at the end of your job, the paper moves up one line when you press **Store**. This carrier return is not stored with the job.
- When you open storage, the typewriter is in Character Print mode (not No Print mode).
- Line space changes are not stored with the job.
- You can store multipage jobs in a single storage area. Use Stop Codes to separate pages of a job during playback. See "Multipage Jobs" on page 4-7.
- Use the **Paper Bail Load Lever** and the **Paper Release Lever** instead of **↑** and **↓** to insert and remove paper. This will prevent you from inserting unwanted blank lines in your stored job.

Playback

With the **Play** key, you can print, revise, copy, or combine stored jobs. You can use playback with storage open or closed. When you play back a job with storage closed, the job prints bidirectionally (the first line prints left to right, the second line prints right to left, and so forth). You can stop playback and then type, make corrections, resume playback, cancel playback, or play back another job. Corrections made with storage closed are not stored with the job.

When playing back multipage jobs, use Stop Codes to automatically stop playback at a preset point. See "Multipage Jobs" on page 4-7.

When storage is *open* during playback, the margins and tabs stored with the job are used. See "Revising a Stored Job Using Character Print Mode" on page 3-11 for information on playing back with storage open.

When storage is *closed* and **ARtn** is on during playback, the current margin settings are used. To use the margins stored with the job, reset the margins.

Beginning Playback (With Storage Closed)

1. Install the correct printwheel.
 - Jobs play back from storage using the *current margin settings*.
 - To set the original margins for playback, use the Directory function (see "Directory" on page 3-15) to print out a directory of jobs with left and right margins, then reset the margins to the job's original left and right margins.
2. Move the carrier to the point where you want playback to begin.
3. Set Automatic Carrier Return on or off.
 - When Automatic Carrier Return is *on* during playback, lines end according to the current margin settings.
 - When Automatic Carrier Return is *off* during playback, the job plays back line for line as you stored it.
4. Set line spacing.
5. Hold down **Play** while you type the number (1 through 99) where you stored the job.
6. Release the keys. Playback begins immediately. The **Play** indicator turns on.

Stopping Playback

Press any key to stop playback.

- If the job is printing *left to right*, the typewriter stops immediately.
- If the job is printing *right to left*, the typewriter finishes printing the current line and performs a carrier return.

Continuing Playback

Press one of the following keys to continue playback:

- → plays the next character.
- **Code + → (Word)** plays the next word.
- ↓ plays to the beginning of the next line.
- **Code + ↓ (Line)** plays to the next line with text.
- **End** plays to the *end of the job*.

If the carrier is at the right carrier limit, press **CRtn**, then press **End** to continue playback.

Cancelling Playback

Press any key to stop playback, then press **Play** to cancel playback and turn the **Play** indicator off.

If you accidentally cancel playback, press **Play**. The **Play** indicator comes on. The carrier is positioned on the next character to print and you may continue playback.

Practice

Install the same pitch printwheel and set the same line space you used to store the job on page 3-7, then playback the job. Practice starting, stopping, canceling, and playing back by one word and one character. Play back the job as many times as you want.

Helpful Hints

- If you press **CRtn** while storing a job, the carrier returns at that point during playback.
- The typewriter stops printing and the **Play** indicator blinks to signal a printwheel pitch change, an alternate keyboard or a Stop Code.
- Jobs stored in proportional spacing and then played back in 10, 12, or 15 pitch may not play back exactly as you typed them.
- When you play back a job using an alternate keyboard, printing stops at the keyboard change and the **Lang** and **Play** indicators start blinking. Install the correct printwheel for the alternate keyboard, then press **End** to continue printing. The typewriter automatically selects the new keyboard. See page 2-20.
- You can play back a draft copy of a job with double spacing and the final copy with single spacing because the line space setting is not stored with the job.
- See "Playing to a Find Point in Character Print Mode" on page 4-24 to play to a specific point in a job.

Margin and Tab Formats in Stored Jobs

Use the Format function (see page 2-3) to set margins and tabs for your jobs. The following guidelines will help you use format areas within stored jobs.

Before Opening Storage — Select a format area *before* opening an empty storage area. You cannot select another format area while in storage. Changing margins and tabs in storage does not affect the format area you select.

After Opening Storage — When you open an empty storage area, the format you selected is automatically copied into the job's format area. If you change the margin and tab settings while in storage, the new settings replace the original format settings for that job. The job is stored with the *new* margins and tabs, but the *original format area* you selected is not changed. One left margin and one right margin is stored with the job. All tab settings and temporary margins are stored with the job.

When you open a storage area that already contains text, the margins and tabs stored with the job are used.

Changing Margins and Tabs After Opening Storage

One left margin and one right margin are stored with each job. If you use **LMar** or **RMar** to change the margins when storage is open, the margins are changed for the *entire* job. The left and right margins for the text already typed will also change to the new margins. Use **IndL** and **IndR** to set temporary left and right margins.

1. Press **Play** to turn the **Play** indicator off.
2. Set margins and tabs.
3. Hold down \leftarrow to return to the left margin.
4. Press **Play** to turn the **Play** indicator back on.

Note: Margin and tab settings cannot be changed in No Print mode.

Typing Hyphens in a Stored Job

Syllable Hyphens

If you are storing a job and want to hyphenate a long word at the right margin, insert a *syllable hyphen* as in this example:

Our department has considered your applica-
tion for review.

Type - (hyphen)

Press CRtn

You must press CRtn after typing the syllable hyphen.

If you play the sentence back with different margins and ARtn on, the *syllable hyphen* will be dropped if the word occurs in the middle of a line.

Note: If you continue typing the word after typing the hyphen and let the carrier return automatically, the hyphen is *not* dropped if the word occurs in the middle of a line during playback.

Practice

1. Insert a 12-pitch primewheel; then choose formal area 3 as saved on page 2-5 (LMar 12 RMar 56).
2. Open an empty storage area.
3. Type the sentence in the example above up to the hyphen after application.
4. Type the hyphen (-) then press CRtn.
5. Type the rest of the example; then close storage.
6. Turn ARtn on and playback the job. Your copy should resemble the example above.
7. Choose formal area 3 as saved on page 2-5 (LMar 12 RMar 44).
8. Playback the job. Your copy should resemble the following.

Our department has considered
your application for review.

Required and Permanent Hyphens

There are two ways to type hyphens so they will always play back with the text.

Keeping a Hyphenated Word on One Line

Keeping a hyphenated word on one line is called a *required hyphen*.

Hold down **Code** while you type a hyphen in text you always want kept together on one line.

Code + - (hyphen)

| | |

The number to call for assistance is 1-800-555-1212.

Allowing Hyphenated Words to Separate at a Line Ending

Permanent hyphens allow words to separate at a line ending regardless of line breaks. Turn **ARtn** on. Type a hyphenated word without pressing **CRtn** or **Code**. The following example contains hyphens that may break automatically at the right margin.

A special visitor to our country is our mother-in-law.

Practice

1. Insert a 12 dot printwheel, then choose formal area 1 as saved on page 2-5 (LMR 10, RMR 16).
 2. Open a new storage area and type the examples above.
 3. Press **Store** to close storage.
 4. Turn **ARtn** on and play back the job. Your copy should resemble the examples above.
 5. Choose formal area 1 as saved on page 2-5 (LMR 10, RMR 16).
 6. Play back the job. Your copy should resemble the following:
- The number to call for assistance
is 1-800-555-1212.

Copying a Job into Another Storage Area

Copy your job into another storage area before beginning revisions if you need the original job for later use. To copy a job quickly:

1. Hold down **Store** while you type the number of an *empty* storage area where you want to copy the job.
2. Select **No Print** mode (press the **Print Mode** key to turn the **No Print** indicator on).
3. Hold down **Play** while you type the number of the job to copy.
4. Press **Store** to close the storage area.

Notes:

1. This procedure copies the job into a second storage area without printing the job onto paper.
2. If the typewriter beeps three times and the **Store** indicator is *not* blinking, there is not enough memory to copy the entire job.

Revising a Stored Job Using Character Print Mode

Revisions are made to jobs with storage open. You can revise on paper using Character Print mode. The **No Print** indicator is off in the Character Print mode.

When revising in Character Print mode, print the job up to the revision point; then add, delete, or make corrections to the text and resume playback. Revisions are stored just as they appear on the paper. Always use Character Print to revise tables and columns.

It is important to have a printed copy of the job for reference when you are revising in storage. Do not use a justified printed copy of your job.

If you have changed margins or pitch, be sure you play back your job while storage is open before revising.

See "Copying a Job into Another Storage Area" to make a copy of your original job for later use.

Playing to the Revision Point

1. Before revising, copy the job as explained in "Copying a Job into Another Storage Area" on page 3-11.
2. Install the same pitch printwheel as originally used and set the line space.
3. Hold down **Store** while you type the number of the job to revise. The **ARtn**, **Store**, and **Play** indicators come on.
4. Press **End** to begin playback.
5. Press any key to stop playback before the revision point.

Adding Text to the Job in Character Print Mode

As you add text to a stored job, the text is inserted into the stored job.

Note: Turn **ARtn** off just before revising tables or columns. Turn **ARtn** on again after revising the table or columns. See page 4-1.

1. Play to the revision point. Press →, **Code + → (Word)**, or ↓ to continue playback up to where you want to add text.
 - If you play past the point where you want to add text, use the **Correction** key to erase back to the correction point. Remember the characters you erased so you can retype them later.
2. Make sure the **Play** and **Store** indicators are on.
 - If you turn the **Play** indicator off, the → and ↓ keys no longer cause text to print. The → and ↓ keys provide express movement to add spaces and lines to your job. Turn the **Play** indicator on again to resume playback with the → and ↓ keys.
3. Type the text you want to add. If you add a word, type a space after it.
4. Type any text you erased.
5. Use →, **Code + → (Word)**, ↓, or **End** to continue playback.

Deleting Text From The Job With Correction Key

Use the **Correction** key to delete text from a stored job with **Storage** open. You can delete text from the paper and the storage memory at the same time.

1. Stop playback before the correction point. Play back one word at a time until the last character in the word and the space you want to remove prints on your paper.
2. Use Character or Word Erase (See 1-18) to delete text from the paper and from memory. (The **Store** indicator must be on.)

- Type any text you want to add to the job. If you add a word, type a space after it.
- Use →, Code + → (Word), ↓ or End to continue playback.

Practice

- Before revising, copy the job you stored on page 3-13 onto a blank page.
- Install the same printer or monitor and set the same line spacing you used to store the job.
- Hold down Store while you type the number of the job you stored on page 3-13.
- Play back one line at a time until three lines have printed. Do not play back the fourth line yet.
- Hold down Code while you press → (Word) to play back one word at a time up to and including the word *Typing*.
- Type the word *speed*, followed by a space.
- Continue playback until the seventh line has printed. Do not play back the eighth line yet.
- Hold down Code while you press → (Word) to play back one word at a time up to and including the number 4.
- Press Code while you press Correction (Word) two times to erase to 4½ from the paper and memory.
- Play back to the end of the job then press Store to close Store. Your paper should resemble the following:

In the late nineteenth century, a period in history marked by the beginning of the industrial revolution and the development of new technologies, typing speed contests drew enthusiastic spectators and provided free advertising for the fledgling typewriter industry. In those days, typing speeds of 40 words per minute were considered astonishing.

Helpful Hints

- Use →, Code + → (Word), and ↓ to control job playback. Do not use CRtn or Spacebar unless you want to insert blank lines or spaces in your job.
- Use stop codes to indicate where changes such as justification, Automatic Carrier Return, line spacing, and typestyle or ribbon changes occur. (See "Stop Code Applications" on page 4-1.)

- Play back the job with storage open to adjust the line endings after revising.
- Use Character Print to revise columns and tables.
- Use the **Correction** key to remove unwanted tabs, carrier returns, and spaces from a stored job.
- If you play into the next line, press the **Correction** key to erase back to the previous line or play the job back again. Remember what you erase so that you can retype the characters later.

Deleting Text from the Job with the Delete Key

You can delete a character, a word, a line, or from some point to the end of the job. Use the **Del** key in combination with a function key to delete text. When you delete information, the typewriter automatically closes up the space.

Note: Turn **ARtn** off just before revising tables or columns. Turn **ARtn** on again after revising the table or columns. See page 4-1.

1. Stop playback before the correction point. Play back one word at a time up to the text you want to delete.
2. Use Character or Word Erase (see page 1-18) to delete text from the paper and from memory if you play past the correction point. Remember the text you erase that must be retyped later.
3. Use one of the following combinations of keys to delete text before it prints:
 - Hold down **Del** while you press → to delete the next character at the carrier.
 - Hold down both **Del** and **Code** while you press → (Word) to delete to the end of the word, including any punctuation and spaces that follow the word.
 - Hold down **Del** while you press ↓ to delete to the end of the line, including the carrier return.
 - Hold down **Del** while you press **End** to delete to the end of the job.
4. Type any text that you erased and wanted to retype later.
5. Use →, **Code** + → (Word), ↓, or **End** to continue playback.

Notes:

1. The printwheel spins when text is deleted with the **Del** key.
2. See "Deleting to a Find Point" on page 4-25 to delete from current position to the specified text.

Correcting Errors with Storage Closed

Corrections made during playback with storage closed are not stored with the job. Correct errors with storage closed in the same way you revised a stored job using Character Print (see page 3-11).

Beginning Playback

1. Hold down **Play** while you type the number where you stored the job. The job plays back bidirectionally. The **Store** indicator is off.
2. Press any key to stop playback before the correction point.

Adding Text to the Job

1. Play up to the point where you want to add text.
2. Type the text.
3. Continue playback.

Deleting Text from the Job

1. Play up to and including the text you want to delete.
2. Use the **Correction** key or **Code + Correction (Word)** keys to erase text that is printed on the paper.
3. Use the **Del** key in combination with the **→**, **↓**, or **End** key to delete text in front of the carrier that has not printed.
4. Continue playback.

Directory

Directory prints a list of stored jobs. The number at the top of the printout is the total amount of typewriter memory available for storage. Each line of the directory printout includes:

- The job number
- The first 50 characters of text in the job.
- The left and right margins.
- The amount of storage used in the job.

Playing the Entire Directory

1. Be sure the **Store** indicator is off.
2. Insert paper into the typewriter.
3. Hold down **Code** while you press **Store(Dir)**.
4. Release the keys.

The printed list should be similar to the following, although it will include all of your stored jobs.

30518

- | | | | |
|---------------------------------|-----|-----|-----|
| 1 The Indenting Function allows | 012 | 090 | 109 |
| 2 In the late nineteenth centur | 020 | 070 | 210 |

The typewriter automatically recalculates margin settings and changes the numbers shown to match the pitch of the current printwheel.

Playing Part of the Directory

1. Be sure the **Store** indicator is off.
2. Insert paper into the typewriter.
3. Hold down **Code** while you press **Store(Dir)** and the number (1 through 99) of the storage job you want the directory to start with.
4. Release the keys.
 - The directory lists the storage jobs beginning with the specific number you typed.

Helpful Hints

- Using the Directory function clears the correction memory.
- You can stop play out of the directory by pressing any key. Playback will stop at the end of the current line.
- The directory prints using the current keyboard. Jobs typed using other keyboards print incorrectly. See "Alternate Keyboards" on page 2-20.
- Tabs and carrier returns are shown as spaces.

Deleting a Stored Job

1. Press and hold down **Del** while you type the number of the job you want to delete.
2. Release the keys.
 - The printwheel spins.
 - The storage area is deleted.

Note: Type a number larger than 100 to cancel deleting a stored job.

Deleting All Storage Areas

Warning: This procedure clears the supplemental dictionary and all storage and format areas, and turns off all typewriter functions.

1. Hold down **Code** and **Shift** while you press **Del**.
2. Release the keys.
 - The printwheel spins.
 - All storage areas are deleted.

Storage Full

Storage Full Warning

When storage is almost full, the typewriter beeps three times and the **Store** indicator blinks. You have space for about 100 more characters.

1. Stop typing.
2. Do one of the following:
 - *Without closing storage*, delete unneeded storage areas (see "Deleting a Stored Job"); or
 - Press **Store** to close the storage area and continue typing. The rest of your job is not stored.

Storage Full

If the typewriter beeps on every keystroke and the **Store** indicator is blinking, storage is full. Follow the instructions in "Storage Full Warning."

Advanced Storage

Stop Codes in Storage

Type a stop code at any point in a job where you want playback to stop automatically.

Stop Code Applications

Reminder to Turn Automatic Carrier Return Off and On

Type a stop code at any point in a job where you want to turn Automatic Carrier Return off (for example, for tables, columns of numbers, or forms). Type another stop code at the point where you want to turn Automatic Carrier Return on again.

Reminder to Change Line Spacing

Type a stop code at any point in a job where you want to change line spacing. Type a second stop code at the point where you want to return the line spacing to its original setting.

Form Letters/Variable Information

Type a stop code at each point where variable information should print in a form letter (for example, where the date and inside address will appear).

Reminder to Turn Justification On or Off

Type a stop code before any portion of a job that you want to justify. Type another stop code at the point where you want to turn justification off.

End of Page - Multipage Jobs

Type a stop code at the end of a full page of text in a multipage job. Use the **Paper Ball Load Lever** to eject and load the paper after the stop code.

Reminder to Change Printwheel

When storing a job, you must type a stop code before a typestyle change so that the typewriter will stop to allow you to change the printwheel. The typewriter automatically stores a stop code when you change to a different pitch.

Keyboard Changes

The typewriter automatically inserts stop codes at keyboard changes in your job. During playback, the **Lang** and **Play** indicators blink to indicate an alternate keyboard selection.

Typing a Stop Code

1. At the point where you want the typewriter to stop during playback, hold down **Code** while you press **9 (Stop)**. Nothing prints on the paper. The printwheel spins.
2. Continue typing the job.

Playing Back a Job That Contains a Stop Code

1. Play back the job as instructed on page 3-4. Printing stops at the stop code and the **Play** indicator blinks.
2. Perform the desired action at the stop code.
3. Press **End** to continue playback.

Deleting a Stop Code

1. Press **Store + the number** where the job is stored.
2. Press **End**.
3. When the typewriter stops during playback, press the **Correction** key. The printwheel spins.

Helpful Hints

- To change the printwheel at a stop code:
 1. Remove the printwheel.
 2. Install the desired printwheel.
 3. Press and release **Code**.
 - If the printwheel is a different pitch, the carrier moves to adjust for the pitch change.
 4. Continue typing or playing back.
- If you want to change the printwheel while storing centered headings, type a stop code at the point to change the printwheel. See "Changing Printwheels While Typing" on page 2-19.

- If you are storing jobs using an alternate keyboard, a stop code is automatically added at the point where you changed the active keyboard.
 - Be sure to select the alternate keyboard and printwheel.
 - Be sure the alternate keyboard and the printwheel you select have the same ID numbers.
- If you use stop codes to add variable information, use **ARtn** when you store the job.
- When storing a multipage job in one storage area, use carrier return followed by a stop code at the end of each page to allow you to easily remove and insert paper during playback. See "Multipage Jobs" on page 4-7.

Form Letters / Variable Information

A form (repetitive) letter is the same letter sent to several different people. When typing a form letter, store the repetitive information (the body of the letter), then play back the letter and type variable information (name, inside address, and so on).

To store a form letter:

1. Press **Store** + the number where you want to store the job. The **ARtn** indicator must be on.
2. Type the form letter. Place stop codes wherever variable information is to appear.
3. Press **Store** to close storage.

Store the following letter, using stop codes where variable information appears. Variable information is indicated by parentheses; for example, (Name.).

Note: Because stop codes do not print on the paper, your copy may not match the example below when you first type it.

Store + number **6 CRtns** **Code + 9 (Inside Address, Line 1)** **CRtn**
Code + 9 (Inside Address, Line 2) **CRtn**
Code + 9 (Inside Address, Line 3)

3 CRtns

Dear Code + 9 (Name)

3 CRtns

Thank you for ordering an IBM Typewriter.
We will deliver your new typewriter on
Code+9 (date). Please call me if
you have any questions.

3 CRtns

Cordially yours,

3 CRtns

Paul Boler
Sales Manager

Store

Playing Back a Form Letter

1. Close storage before beginning playback. (If storage is open, variable text is stored with the form letter.)
2. Hold down **Play** while you type the number where the form letter is stored.
3. When playback stops at a stop code and the **Play** indicator blinks, type the variable information.
 - The information you type prints on your playback copy only.
 - Use the **Correction** key to correct errors.
 - Remember to type a space after the last word.
4. Press **End** to continue playback.
5. Repeat steps 3 through 4 for each stop code.

Justification during Playback

Play back jobs in justification mode for an even right margin (as in a newspaper). You must set left and right margins before justifying during playback.

Justifying an Entire Job

Typing a Job to Be Justified:

1. Press **Store + the number** where you want to store the job.
2. Type the job using **ARtn**.
3. Press **CRtn** for lines that end *before* the right margin and should not be justified.
4. Hold down **Code** while you press **Spacebar** or - (hyphen) between each word you want to keep together during playback. See "Required and Permanent Hyphens" on page 3-10.

Playing Back a Job with Justified Margin:

1. Make sure the **Store** indicator is off.
2. Set the left and right margins.
3. Hold down **Code** while you press **Play(Jstify)** and the **number** where the job is stored
 - Playback begins immediately.
 - The **Play** indicator is on solid and the **ARtn** indicator is blinking.
 - Lines ended by pressing **CRtn** do not justify.
4. The **ARtn** indicator returns to its original state when playback is complete.

Justifying Part of a Job

1. Play back the job to the desired point to begin justification. Use →, **Code + →(Word)** and ↓.
2. Hold down **Code** while you press **Play(Jstify)** to turn justification on. The printwheel spins and **ARtn** indicator blinks.
3. Press **End** to begin playback with justification on.
4. Playback the job to the desired point to stop justification. Press any key to stop playback.
5. Hold down **Code** while you press **Play(Jstify)** to turn justification off. The printwheel spins and **ARtn** indicator stops blinking.

Sample Justified Printout

Justified copy gives the appearance of a printed manuscript. Extra space is added automatically between words so that the right margin is even. Do not press the carrier return key while typing lines to be justified. If the last line of the job is a short line and should not be justified, press carrier return to end that line.

Practice

1. Insert a 12 pitch printwheel, then choose format area (as saved on page 2-5) 14 Mag 12 R/Mar 62.
2. Open an empty storage area and type the sample printout above. (The AR10 indicator must be off.)
 - Space only once between words.
 - Press CRin only at the end of the last line of each paragraph.
3. Press Store to close storage.
4. Hold down Cool while you press Play+Slip and the number where the job is stored. Playback begins immediately. Lines ended by pressing CRin do not justify.

Helpful Hints

- Turn justify off for sections of jobs containing tables and columns.
- Use Stop codes to stop automatically (as determined in memory location and off) stored jobs.

Multipage Jobs

You can store multipage jobs using two different methods. You can store the job in one storage area and type a stop code (**Code + 9**) at the end of each page. You can also store each page in a separate storage area.

Storing a Multipage Job with Stop Codes

1. Press **Store + the number** where you want to store the job.
2. Type the job using **ARtn**.
3. Type all the pages into one storage area.
4. Press **CRtn** and then type a stop code (**Code + 9**) at the end of the text for each page.
5. Insert a new page. Use the **Paper Bail Load Lever** for this. *Do not use Paper Up, Paper Down, ↑ or ↓.*
6. Continue using **CRtn** and a stop code at the end of the text for each page.

Storing a Multipage Job in Separate Storage Areas

1. Press **Store + the number** where you want to store a page of the job.
2. Type one page.
3. Press **Store** to close storage.
4. Remove the completed page and insert a new one.
5. Continue typing the job by repeating steps 1 through 4.

Playing Back a Multipage Job with Stop Codes

If you have made no revisions affecting page length, play back the job.

- Playback stops at the stop code at the end of each page so you can insert a new sheet of paper. The Play indicator blinks. Eject and load paper using the **Paper Bail Load Lever**.
- To resume playback, press **End**.

If your revisions result in the stop code appearing before the end of the page:

1. Press **Store + the number** where you have stored the job.
2. Play back until the typewriter stops at the stop code.
3. Press the **Correction** key once to erase the stop code.
4. Continue playback until you reach the desired end of the page.
5. Press **CRtn**, then hold down **Code** while you press **9(Stop)** at the end of the first page.
6. Insert the next sheet of paper and continue using steps 2 through 5 to change any other stop codes.

If your revisions move the stop code to the second page:

1. Press **Store + the number** where you have stored the job.
2. Stop playback where the first page should end.
3. Press **CRtn**, then hold down **Code** while you press **9(Stop)** at the end of the first page.
4. Insert the next sheet of paper.
5. Continue playback until you reach the original stop code.
6. Press the **Correction** key to erase the stop code.
7. Continue playing and repeat steps 2 through 6 to change any other stop codes.

Helpful Hints

Do not store footnotes, page headings, or page numbers with the job since revisions may cause page endings to change.

Using Mark for Preprinted Forms

Typing preprinted forms is a two-step process: first, use the **Mark** function to store a layout of the form; second, play back the form and fill in the blanks.

When storing the form layout, *mark* the form at each point where you will insert or print text. A mark (**Code + Shift + M**) identifies a point on the form to which the carrier should move.

See the sample form on the next page.

- **Variable Information**

Each *M* shows where to type a mark (the *M* does not actually print). A mark automatically supplies a stop code. During playback the carrier moves to the mark and stops so you can type variable information. *Variable information* is text that changes for each form and is not stored with the job.

- **Constant Information**

Each *MC* shows where to type a mark. Press the **Correction** key once to erase the supplied stop code, then type constant information. *Constant information* is text that is the same for each form and is stored with the job. The typewriter prints the constant information at these locations (■■■) as you type and when you play back the form.

Sample Preprinted Form

Newspaper Subscription Service

Contributors List

First Name <input type="text" value="M"/>	M.I. <input type="text" value="M"/>	Last Name <input type="text" value="M"/>	Contribution Amt. <input type="text" value="M"/>
Address <input type="text" value="M"/>			Date of Contribution <input type="text" value="M"/>
City <input type="text" value="M"/>	State <input type="text" value="M"/>	Zip <input type="text" value="M"/>	ID Number <input type="text" value="M"/>

Telephone No.

Distribute to: Accounting
Publishing
Direct Mail



Route Manager



Newspaper

Storing a Form Layout

1. Insert a blank form using the **Paper Bail Load Lever**.
2. Set the *left margin* at the *left edge* of the paper.
3. Hold down **Store** while you type the number of the storage area you want to open.
4. Turn **ARtn** indicator off.
5. Type the form layout as follows:
 - a. Move the carrier to the point on the form where variable or constant information should print.
 - b. At each point where variable information is to appear, hold down both **Code** and **Shift** while you press **M (Mark)**.
 - c. At each point where constant information is to appear, hold down both **Code** and **Shift** while you press **M (Mark)**. Then press the **Correction** key once—which erases the stop code—and type the constant information. During playback, the typewriter prints this constant information without stopping.
6. Repeat step 5 for each mark point until you finish the form.
7. Close storage when you finish typing the form layout.

Helpful Hints

- You can insert marks in any order. The marks play back in the order you entered them.
- If you type a mark by mistake, press **Correction** twice to erase it.
- If you forget to type a mark while typing a form layout do one of the following:
 - Erase back to where the mark should be and type it.
 - Move to the point where the mark should be and enter it.
 - Complete the form, then revise it. See "Correcting the Form Layout" on page 4-12.

Playing Back the Form Layout

1. Insert a blank form using the **Paper Bail Load Lever**.
2. Set your left margin at the left edge of the paper.
3. Turn the **ARtn** and **Store** indicators off.
4. Hold down **Play** while you type the number of the storage area where you stored the layout. The layout begins playing back.
5. When the typewriter stops, type variable text to fill in the form.
6. Press **End** to continue playback.
7. Repeat steps 5 and 6 until you finish playing back the form.

Notes:

- Because you are playing back the form with storage closed, the variable information is *not* stored with the form layout.
- Typing or playing a mark clears the correction memory.

Correcting the Form Layout

1. Hold down **Store** while you type the number of the storage area where you stored the layout. The **Store** and **Play** indicators come on.
2. Turn the **ARtn** indicator off.
3. Play to the point where you want to add or delete a mark.
 - Hold down both **Code** and **Shift** while you press **M (Mark)** to add a mark.
 - Press the **Correction** key once to delete only the stop code and type the constant information.
 - Press the **Correction** key twice to delete the stop code and the mark.
4. Close storage.

Practice

Make a copy of the sample form on page 4-10, or use a form from your business or home. Follow the steps on page 4-11 to practice changing the layout of the layout.

Pre-Defined Form Templates (U.S. Only)

Forms 57 through 99 are pre-defined forms templates that are already stored in the typewriter. The pre-defined forms templates can be copied to a storage area and printed or changed to your specifications. See list on page 4-16 to select a pre-defined form template.

Creating a Pre-Defined Form

Before a pre-defined form can be used, it must be copied from one of the forms area (57 through 99) to an active storage area.

1. Hold down **Store** while you type the number of the storage area where you want to copy the pre-defined form.
2. Hold down **Play** while you press **F** and the number (57 through 99) of the pre-defined form you want to copy. Release the **Play** key.

Note: The typewriter copies the pre-defined form template into the storage area and turns on **No Print**.

3. Press **Store** to close storage.

To play the form layout, see "Playing Pre-Defined Forms" on page 4-14. To change the form layout, see "Correcting the Form Layout" on page 4-12.

Helpful Hints

To help you remember the storage number when creating a pre-defined form from a template, either:

- use the same storage number as the template form number on Page 4-16.
OR
- note the storage number.

Playing Pre-Defined Forms

1. Place the left edge of the form in the typewriter at the **0 paper scale position.** (See Figure 4-1.)

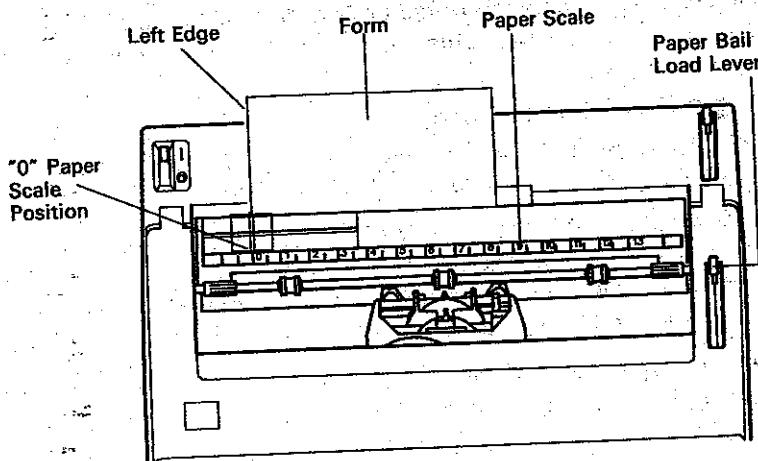


Figure 4-1.

2. Pull the **Paper Bail Load Lever** forward. The typewriter will load the form.
3. Use the **J**, **↑**, **Paper Up (Micro)**, and **Paper Down (Micro)** keys to position the form with the top edge of the paper aligned with the top of the paper guide. See Figure 4-2.

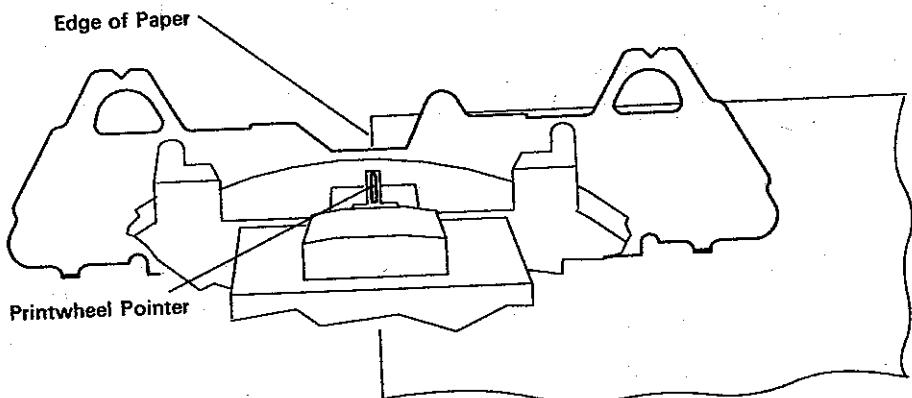


Figure 4-2.

4. Set the left margin at zero.
5. Hold down **Code** while you pull the **Paper Ball Load Lever** forward. Leave the **Paper Ball Load Lever** in the open position until the form has advanced an inch. The top margin is set to the top of the form.
6. Turn the **ARtn** and **Store** indicators off.
7. Hold down **Play** while you type the number of the storage area where you stored the pre-defined form.
8. When the typewriter stops, type variable text to fill in the form.
9. Press **End** to continue playing the form.
10. Repeat steps 8 and 9 until you finish playing back the form.

Notes:

1. Variable information is not stored with the form layout.
2. Playing a mark clears the correction memory.
3. To cancel playing a form, press **Play**.
4. To play back continuous forms, set the top margin (**Code** + **Paper Ball Load Lever**) at the top of each form.
5. To reset the top margin to 1 inch when you are finished printing the pre-defined forms, hold down **Code** and **Shift** while you pull the **Paper Ball Load Lever**.

Pre-Defined Form Templates

Form Form Name/Description

Area

Number

57	Adams Purchase Order NC 2811 (8.5" x 11")
58	Adams Purchase Order NC 2871 (8.5" x 7")
59	Adams Invoice NC 2812 (2 part 8.5" x 11")
60	Adams Invoice NC 2872 (2 part 8.5" x 7")
61	Adams Invoice NC 2878 (2 part 8.5" x 7")
62	Adams Invoice NC 3815 (3 part 8.5" x 11")
63	Adams Invoice NC 9053 (3 part 8.5" x 7")
64	Adams Invoice 3-872 (3 part 8.5" x 7")
65	NEBS Purchase Order Product 91 (8.5" x 7")
66	NEBS Purchase Order Product 92 (8.5" x 11")
67	NEBS Invoice Product 105 (8.5" x 7")
68	NEBS Invoice Product 106 (8.5" x 11")
69	NEBS Invoice Product 107 (8.5" x 7")
70	NEBS Invoice Product 108 (8.5" x 7")
71	NEBS Invoice Product 4546 (8.5" x 11")
72	REDIFORM Purchase Order 1S143/1P143 (8.5" x 7")
73	REDIFORM Purchase Order 1S146/1P146 (8.5" x 11")
74	REDIFORM Invoice 7S724/7P724 (8.5" x 7")
75	REDIFORM Invoice 7S728/7P728 (8.5" x 7")
76	REDIFORM Invoice 7S736/7P736 (8.5" x 11")
77	TOPS Snap-Off Purchase Order FORM 3821 (8.5" x 7")
78	TOPS Snap-Off Purchase Order FORM 3830 (8.5" x 11")
79	TOPS Snap-Off Invoice FORM 3810 (8.5" x 7")
80	TOPS Snap-Off Invoice FORM 3811 (8.5" x 11")
81	TOPS Snap-Off Invoice FORM 3813 (8.5" x 7")
82	TOPS Snap-Off Invoice FORM 3833 (8.5" x 7")
83	QUILL Purchase Order 7-45337 (8.5" x 7")
84	QUILL Purchase Order 7-45948 (8.5" x 7")
85	QUILL Purchase Order 7-45950 (8.5" x 11")
86	QUILL Invoice 7-45335 (8.5" x 7")
87	QUILL Invoice 7-45939 (8.5" x 7")
88	QUILL Invoice 7-45941 (8.5" x 11")
89	Health Insurance Form UB-92 HCFA-1450
90	Health Insurance Form HFCA-1500 (12-90)
91	Airborne Express International Express Airbill 002 (9/88) M
92	Airborne Express U.S.Airbill 001 (5/93) S
93	Burlington Air Express OP 100(11-92)
94	DHL Worldwide Express REV 9-89
95	Emery Worldwide 600001-46 (10/91)
96	Federal Express International Air Waybill REV 1/92
97	Federal Express Airbill Revision Date 12/92

Form Area Number	Form Name/Description
98	UPS Customer Counter Shipping Record 01122702 9-86 (10MM 9-93)
99	UPS Next Day Air Shipping Document 010191116 11/92 W

Advanced Revision Using No Print

In No Print mode, you can move to a specific point in a job *without printing*. No Print is selected by pressing the **Print Mode** key and turning on the **No Print** indicator while storage is open.

Note: It is important to have a printed copy of the job for reference when you are revising in No Print. Do not use a justified printed copy of your job.

If you have changed margins or pitch, be sure you play back your job while storage is open before revising.

In Character Print mode (see "Playback" on page 3-4) you play back the document onto the paper as you move through storage. For example, to move to the beginning of line five in storage, you would have to play back the first four lines.

In No Print mode you can move through storage without playing out the text onto the paper. No Print is similar to turning quickly through the pages of a book without reading the contents.

In No Print you can move without printing to a character, word or line, to the end of the job, to a specific word (see "Find" on page 4-22), or return to the beginning of the job. Moving in No Print using the carrier movement keys (\uparrow , \downarrow , \leftarrow , \rightarrow), **Home**, **End**, or **Find** keys does not change text in the stored job. However, the **CRln** and **Spacebar** keys do change the stored job by adding a blank line or extra spaces, respectively.

For example, to move to the beginning of line five, word by word, you would select No Print mode and then press **Code + \rightarrow (Word)** until you arrive at line five. You can also press \downarrow four times, or use the **Find** function, to move quickly to line five.

You can also delete text in No Print. You may want to copy the job before you begin deleting text in No Print. See "Copying a Job into Another Storage Area" on page 3-11 to make a copy of your original job for later use.

Using No Print to Move to a Character, Word, or Line

1. Press **Store + the number** where you stored the job.
 - You are now at the beginning of the job.
2. Press the **Print Mode** key to turn the **No Print** indicator on.
3. Press one of the following keys to move without printing:
 - → moves one character to the right.
 - ← moves one character to the left.
 - **Code + → (Word)** moves to the beginning of the next word.
 - **Code + ← (Word)** moves to the beginning of the previous word.
 - ↓ moves to the beginning of the next line.
 - ↑ moves to the beginning of the previous line.
 - **Code + ↓ (Line)** moves to the next line with text.
 - **Code + ↑ (Line)** moves to the previous line with text.
4. The carrier moves to the next character, word, or line, and **no text is printed**.

Note: In No Print mode, you cannot move over or revise text that has already been printed.

Using No Print to Advance to the End of a Job

1. Press **Store + the number** where you stored the job.
 - You are now at the beginning of the job.
2. Press the **Print Mode** key to turn on the **No Print** indicator.
3. Press **End** to advance to the end of the job.
 - The printwheel spins and **no text is printed**.
 - The typewriter is at the end of the job.
4. Press the **Print Mode** key to turn the **No Print** indicator off.

Note: See "Advancing To a Find Point in No Print Mode" on page 4-22 to advance to a specific text in No Print.

Using No Print to Return to the Beginning of the Job

In No Print mode you can move directly to the beginning of the job. Return to the beginning of the job while storage is open by pressing the **Home** key when the **No Print** indicator is on.

1. Press the **Print Mode** key to turn the **No Print** indicator on.
 - The **Store** indicator must be on indicating that storage is open.
2. Press the **Home** key to return to the beginning of the job.
 - The Printwheel spins and no text is printed.
 - The carrier moves to the left margin.
 - The typewriter is at the beginning of the job.
3. Press the **Print Mode** key to turn the **No Print** indicator off.

Practice

In the late nineteenth century, a period in history marked by the Industrial Revolution, the development of new technologies, typewriting contests, enthusiasm for operators, and provided free advertising for the struggling office equipment industry. At those days, typing speeds of 40 to 45 words per minute were considered fast typing.

1. Insert a 2-punch printwheel.
2. Press and hold down **Store**, while you type the number 1 through 99, where you stored the job on 3-2.
 - The **Store Play** and **Alt** indicators turn on.
3. Press the **L** key to play back the first line of text onto the paper.
4. Press the **Print Mode** key to select the No Print mode. The **No Print** indicator turns on.
5. Press the **R** key five times to move five characters to the right without printing the text on the paper.
6. Press the **L** to move to the beginning of the next line. Notice it is printed on the paper. The paper indexes up one line.
7. Press **Code** + **(Word)** to move one word to the right.
8. Press the **Print Mode** key to return to the Character Print Mode. The **No Print** indicator turns off.
9. Press the **L** key to play back the rest of the third line of text onto the paper.
10. Press the **Print Mode** key to select the No Print mode.

11. Press the **Left** key to move to the beginning of the next line of text. Notice the printwheel on the paper. The paper moves as you move the carrier.
12. Press the **End** key to advance to the end of the job.
13. Press the **Print Mode** key to select the **No Print** indicator mode. The **NO PRINT** indicator will come on.
14. Press and hold the **Return** key and type the **End**.
15. Press **Store** to close storage. The **Store** indicator turns off.
16. Press **Print** + **End** to select the job you just stored (see page 4-11, **LINES & PRINTS**).
17. Press and hold the **Print** wheel until you type the number where you stored this procedure job. The job plays back exactly as printed above with the **End**. The **End** is added to the end of the job.

No Print Mode - Helpful Hints

- If you type or print text in Character Print and then change to No Print, you cannot move over or revise the text that has already been printed. If you return to Character Print to revise the text on the paper, replay the text before making revisions.
- You can type text into your job in No Print mode. The text is stored in your job but is not printed on the paper. The carrier moves for each character.
- You cannot select No Print mode when the carrier is over printed text. Press the **Reloc** (Relocate) key to return to the end of the printed text, then press the **Print Mode** key to select No Print mode.

Deleting Text in No Print Mode

Notes:

- Use Character Print to revise tables and columns.
- The printwheel spins when text is deleted.

1. Press **Store** + the number where you stored the job:
 - You are now at the beginning of the job.
2. Press the **Print Mode** key to turn the **No Print** indicator on.
3. Move to the point where you want to delete text.
4. Delete text using one of the following combinations of keys:
 - **Del** + **→** deletes the character at the carrier.
 - **Del** + **←** deletes the character at the carrier. The carrier moves to the previous character.

- **Del + Code** while you press → (Word) deletes to the end of the word, including any punctuation and spaces that follow the word.
 - **Del + Code** while you press ← (Word) to deletes to the beginning of the word. This *does not* delete the space preceding the word. The carrier moves to the space that preceded the deleted word.
 - **Del + ↓** deletes to the end of the line, including the carrier return.
 - **Del + End** deletes to the end of the job.
-

Find

Using the Find function, you can move directly to the beginning of a specific word or line to change, replace, delete, or add text to a job. You can also use Find to advance, play, or delete to a specific point.

Note: The Find operation is cancelled if the typewriter stops for a stop code (Play indicator blinking) while you are using Find.

Advancing To a Find Point in No Print Mode

1. Hold down **Store** while you type the number of the storage area you want to open. The **ARtn**, **Store**, and **Play** indicators come on.
2. Press the **Print Mode** key to select No Print mode. The **No Print** indicator turns on.
3. Press **Find**. The printwheel spins, the carrier moves to the left carrier limit and the **No Print** indicator blinks.
4. Type the text that you want to find (up to 24 characters) exactly as it appears in your stored job.
 - When searching for the word *the*, your typewriter also finds occurrences of the words *then*, *these*, *lathe*, and so on. Use punctuation, capitalization, or spaces before and after the word to make specified text unique.
 - Use the **Correction** key to correct errors in specified text.
5. Press **Find** to search to the end of the job for the next occurrence of the specified text. The typewriter advances to the beginning of the specified text. No text is printed. If the text was *not* found, then the typewriter beeps and the carrier returns to its previous location.
6. Revise the text as instructed in Chapters 3 and 4.

Repeating Find for the Same Text in No Print Mode

Note: The Store and No Print indicators are on.

1. Press **Find**. The last text you specified is remembered.
2. Press **Find** to search to the end of the job for the next occurrence of the same text string. No text is printed. If the text was *not* found, then the typewriter beeps and the carrier returns to its previous location.

Practice

1. Message 12.DOC contains a word you choose to make easier to saved on page 12. **Store** it.
2. Hold down **Store**, while you type the number of the page you stored on page 12.
3. Press the **Print Mode** key to select No Print mode, then press **Find**.
4. Type the word **beginnings**.
5. Press **Find**. The carrier moves to the beginning of the word **beginnings**.
6. Delete the word **beginnings** by pressing **Del** + **Code** 4 -- (Wors) and type **beginning** + one space.
7. Press **Find**.
8. Type the word **beginning**, then press **Find**.
9. Delete the word **beginning** and type the phrase **the early days of** and one space.
10. Press **Store** to close Storage when you finish revising the job.
11. Play back the job. Your copy should resemble the following:

In the late nineteenth century, competition in
typewriting was stimulated by the first years of
the Industrial Revolution and the development
of new technology, typing contests were
held as the spectators and provided free
advertisements for a struggling office equipment
industry. In those days, typing speeds of
40 to 45 words per minute were considered
as astonishing.

Helpful Hints

- If the typewriter beeps then the text was not found.
 - Type the specified text **exactly** as it appears in the stored job.
 - Make sure the carrier is not already resting on or after the text you want to find.
- If you specify more than 24 characters to find, the typewriter beeps and ignores each additional character you type.
- Many alternate keyboards contain accent marks (dead keys) that print without advancing the carrier to the next space. To find text containing accent marks, type the character but not the accent mark. For example, to find *resumé*, type *resume*.
- You may also press the CRtn or End key to begin searching for the text you want to find.

Playing to a Find Point in Character Print Mode

Combine Find with Play to play to a particular point in a stored job.

1. Hold down **Store** while you type the number of the job you want to play back.
2. Press **Find**. The printwheel spins and the carrier moves to the left carrier limit. The **No Print** indicator blinks.
3. Type the text you want to play to.
4. Press **Find**. The job plays to the beginning of the text you specified. If the text was *not* found, then the typewriter beeps and the carrier returns to its previous location.

Repeating Find for the Same Text in Character Print Mode

Note: The **Store** and **Play** indicators are on.

1. Press **Find**. The last text you specified is remembered.
2. Press **Find** to search to the end of the job for the next occurrence of the same text string. The job plays back to the beginning of the text. If the text was *not* found, then the typewriter beeps and the carrier returns to its previous location.

Deleting to a Find Point

Combine Find with Delete to delete to a particular point in a stored job.

1. Hold down **Store** while you type the number of the job you want to revise.
2. Play or move to the point where you want to *begin* deleting text.
3. Hold down **Del** while you press **Find**. The printwheel spins and the carrier moves to the left carrier limit. The **No Print** indicator blinks.
4. Type the specific find text just following the last word you want to delete, then press **Find**. Remember this will delete *up to* the find text you specify.
 - The specific find text is *not* deleted.
5. Press **Store** to close storage when you finish revising the job.

Practice

1. Hold down **Store** while you type the number of the job you stored on page 4-23.
2. Press **Find**, then type the phrase *and provided*.
3. Press **Find**. The carriage feeds to the beginning of the word and Hold down **Del** while you press **Find**, then type the phrase *in those days*.
4. Press **Find**. Text is deleted up to the beginning of the word.
5. Press **Enter** twice, type a period, and press the Spacebar once.
6. Press **End** four times, play back one job, then close storage. Your copy should resemble the following:

In the latter half of the twentieth century, a period in history marked by the technological revolution and the development of new technologies, typewriter operators were enthusiastic spectators. In those days, typing speeds of 40 to 45 words per minute were considered outstanding.

Document Assembly

Document Assembly allows you to combine separate storage areas which contain parts of a document—to assemble a complete document. You can assemble documents on paper (in Character Print) or only in memory (in No Print). In Character Print, you can copy parts of a job into an open storage area. In No Print, the entire job is copied into an open storage area. Copying always starts at the beginning of the job.

If the assembly requires more storage space than is available, the typewriter will beep three times and the **Store** indicator will blink. See "Storage Full" on page 3-17.

Important: This typewriter was designed so that, even if you stored your jobs with *different* margins, they all play back with the *same* margins during document assembly.

If you stored your jobs with different margins and want them assembled with their stored margins intact, use the Indent function as described in "Changing Margins and Tabs After Opening Storage" on page 3-7 to set temporary margins during document assembly.

If you stored the job you are copying with indented margins, make sure the assembled document plays back correctly.

Assembling Documents

Use No Print to copy an entire storage area quickly into an existing storage area. You can also use No Print to duplicate a storage area before extensively revising it.

1. Hold down **Store** while you type the number of the storage area where you want to copy the job. If the storage area already contains text, the **Play** indicator comes on.
2. Print to the point where you want to insert the other job.
3. Press the **Print Mode** key to select No Print mode.
4. Hold down **Play** while you type the number of the stored job that you are copying. Release the keys.
5. Press **Store** to close storage.

Assembling in Character Print with Storage Open

You can also combine parts of jobs using Character Print. Follow the steps below to save an assembled document.

1. Before beginning document assembly, copy your job as explained on page 3-11.
2. Hold down **Store** while you type the number of the first job that you want to play back.
3. Make sure the **No Print** indicator is off.
4. Press **End**, **J**, or **→** to start playback.
5. Press **any key** to stop playback of the first job near the point where you want to copy the other job, then press **→** or **Code + → (Word)** to play to that point.
6. Hold down **Play** while you type the number of the second job. The second job plays back from the beginning.
7. Press **any key** to stop playback of the second job near the point where you want to copy another job or continue playback of the first job, then press **→** or **Code + → (Word)** to play to that point.
8. Do one of the following:
 - Hold down **Del** while you press **End** to cancel playback of the second job.
 - The printwheel spins.
 - Press **End**, **→**, or **J** to continue playing back the second job. At the end of the second job, playback stops.
 - Hold down **Play** while you type the number of a third job.
 - The third job plays back from the beginning.
 - The rest of the second job is not included in the assembled document.
9. Press **End**, **→**, or **J** to continue playing back the first job.
10. Close storage.

Assembling in Character Print with Storage Closed

Hold down **Play** while you type the number of the first job to play back, then continue with step 5 above. Do not press **Store** to open a storage area. The assembled document is not stored.

Practice

1. Insert a 12-page document file. Then choose **Format Area** (page 2-5) in **File** → **RMD 55**.
Store the paragraph(s) below in storage area 80. This storage area already contains text. Close the storage area when you are finished.
This is storage area 80. You can type in the text below or copy and paste it from another job.

This is storage area 80. You can type in the text below or copy and paste it from another job. Supply **File** → **New** when **Storage Area** is open. The results of the command will not be saved.
2. Store the paragraph(s) below in storage area 81. If storage area 81 already contains text, close the storage area and open it again.
This is storage area 81. You can type in the text below or copy and paste it from another job.

This is storage area 81. You can type in the text below or copy and paste it from another job. Press **Shift** + **Space** to cancel playback.
3. Store the paragraph(s) below in storage area 82. If storage area 82 already contains text, close the storage area and open it again.
This is storage area 82. You can type in the text below or copy and paste it from another job. You can type in the text below or complete the resume playback, cancel playback, or begin playing a third job.

This is storage area 82. Paragraph 2: Press **Play** plus a number to begin playing a third job.
5. Complete the exercises on pages 4-29 and 4-30.

Exercise 1: Combining Jobs With Storage Closed

1. Hold down Play while you type 01.

2. Press End to Stop playback as soon as printing begins.

3. Use 1 to play paragraph 1 and the blank line following it. Do not play the first line of paragraph 2.

4. Hold down Play while you type 02.

5. Press End to Stop playback as soon as printing begins.

6. Use 1 to play paragraph 1 and the blank line following it. Do not play the first line of paragraph 2.

7. Hold down Dc while you press End to cancel further playback of storage area 02.

8. Press End to resume playback of storage area 01.

9. Use 1 to play paragraph 1 and the blank line following it. Do not play the first line of paragraph 2.

10. Hold down Dc while you press End to cancel further playback of storage area 01.

11. Press End to resume playback of storage area 01.

Exercise 2: Combining Jobs into a New Storage Area

1. Open storage area 85. (Storage area 85 already contains one closed storage area and open another.)

2. Copy storage area 89 into storage area 85 as follows:

3. Select Job 10.

4. Hold down Play while you type 80.

5. Press Home to move to the beginning of storage area 85.

6. Select Character Print if the Print indicator is off.

7. Use 1 to play paragraph 1 and the blank line following it. Do not play the first line of paragraph 2.

8. Follow steps 4 through 10 of exercise 1 to play back the first paragraph from storage areas 81 and 82.

9. Press End to resume playback of storage area 85.

10. Close storage area 85.

Helpful Hints

- When storing parts of a job in separate areas, press CRtn twice at the end of each job. This allows one blank line between paragraphs stored separately when they are played back in document assembly.
 - You cannot copy a job into itself.
 - If the typewriter beeps three times and the **Store** indicator blinks, then the storage is full. See "Storage Full" on page 3-17.
 - If the typewriter beeps when you try to copy the job:
 - You may be trying to copy an empty storage area.
 - You may be trying to copy a job during Centering, Right Flush, or Decimal Tabulation. Turn these functions off when assembling jobs.
 - If the typewriter beeps three times and the **Store** indicator is not blinking, there is not enough memory to copy the entire job.
 - When playback is stopped, you can correct the printed text. If you move the carrier away from the point where playback stopped, the typewriter relocates to that point before continuing playback.

Spell Check

Spell Check allows the typewriter to check spelling as you type.

When you type a space or punctuation after a word, the spelling is checked against a main dictionary and a supplemental dictionary.

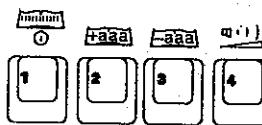
The main dictionary contains approximately 50,000 words. The supplemental dictionary can contain up to 300 words.

When you type a word that is not found in either dictionary, the spelling beep sounds. The spelling beep has a different tone from the normal typewriter beep. Some correctly spelled words—such as proper names, abbreviations, and technical terms—may cause a spelling beep because they are not in either dictionary. You can put these words in the supplemental dictionary.

Only words containing 23 characters or less are checked. Spell Check beeps to indicate an error when a word with more than 23 characters is typed.

Use the **1**, **2**, **3**, and **4** keys with the **Code** key to activate the various Spell Check functions.

The keys on your typewriter will look like one of the following:



Using Spell Check

You can use your typewriter with Spell Check on or off. The Spell function setting is saved when you turn the typewriter off.

To turn Spell Check on, hold down **Code** while you press **1 (Spell)**. The spelling beep sounds. To turn Spell Check off, hold down **Code** while you press **1 (Spell)**. The printwheel spins.

If you type a word not found in either the main or supplemental dictionary, the spelling beep sounds. You can ignore the beep and continue typing, correct the word (if it is misspelled), or add the word to the supplemental dictionary.

Supplemental Dictionary

You create the supplemental dictionary for words that you use often that are not in the main dictionary, such as proper names or technical terms.

Unlike the main dictionary, the supplemental dictionary can only check a word *exactly* as you typed it. Words are not checked for plurals, prefixes, or suffixes. For example, if you add the word *frog* to the supplemental dictionary, typing *frogs* causes the spelling beep to sound as if it were misspelled.

Each time you add a word to the supplemental dictionary or type a word already in the supplemental dictionary, that word becomes the first word in the dictionary. Therefore, the most recently used words are in the front of the dictionary. The supplemental dictionary can hold up to 300 words. When the supplemental dictionary is full and you add a word, the last word in the dictionary is deleted.

The supplemental dictionary is saved when you turn the typewriter off as long as good batteries are installed.

Adding a Word to the Supplemental Dictionary

If the last word you typed caused the spelling beep to sound, and it is 23 characters or fewer, you can add it to the supplemental dictionary. You must follow the word with a space or punctuation before you can add it to the dictionary. The carrier must rest to the right of, and not on, the selected word.

Hold down **Code** while you press **2 (Add)** to add the last word you typed to the supplemental dictionary. The printwheel spins when the word is added.

Deleting a Word from the Supplemental Dictionary

To delete a word from the supplemental dictionary, type the word followed by a space or punctuation then hold down **Code** while you press **3 (Delete)**. The printwheel spins when the word is deleted.

Changing the Sound of the Spelling Beep

You can change the sound of the spelling beep to a tone that is different from that of the typewriter next to you, or to a volume that is more suitable to the noise level in your work area.

Hold down **Code** while you press **4 (Vol)** until the spelling beep has the desired sound. The tone you select is saved when you turn the typewriter off.

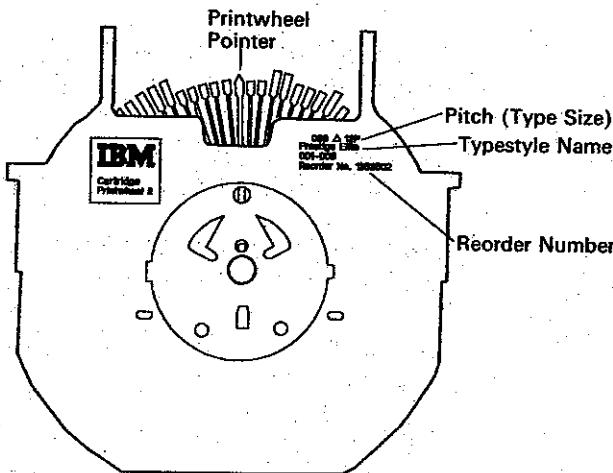
Reference

Ordering IBM Supplies (U.S. and Canada only)

To order IBM supplies, contact an authorized dealer or in the U.S. call toll free 1-800-438-2468. In Canada, please call an authorized dealer or call toll free 1-800-663-7662.

Typestyle Samples

Your typewriter uses an IBM Cartridge Printwheel II, available in a variety of different typestyles and pitches. When ordering printwheels, see the location of the reorder number below. Personal computer, foreign language, and symbol character printwheels are also available.



Note: Because of the differences between printed and typewritten impressions, use the typestyle samples on the following pages only as a guide.

Note: The U.S. typestyles beginning on page 6-2 are for use with the U.S. keyboard shown on page 1-2. The United Kingdom typestyles beginning on page 6-5 are for use with the United Kingdom keyboard shown on page 1-3.

Typestyle Samples and Pitches - U.S.

10 Pitch

▲ Advocate 1353845	ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz	1234 6789
▲ Artisan 10. 1353520	ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz	1234 6789
▲ Bookface Academic 1353844	ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz	1234 6789
▲ Courier 10 1353511	ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz	1234 6789
▲ Delegate 1353843	ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz	1234 6789
▲ Manifold 1353846	ABCDEFGHIJKLMNOPQRSTUVWXYZ ABCDEFGHIJKLMNOPQRSTUVWXYZ	1234 6789
▲ OCR-A 1353246	ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz	1234 6789
▲ OCR-B 1353247	ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz	1234 6789
▲ Pica 1353829	ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz	1234 6789
▲ Presentor 1353015	ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz	1234 6789
▲ Prestige Pica 1353503	ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz	1234 6789
▲ Rhetoric 1353736	ABCDEFGHIJKLMNOPQRSTUVWXYZ ABCDEFGHIJKLMNOPQRSTUVWXYZ	1234 6789
▲ 1403 OCR 1353075	ABCDEFGHIJKLMNOPQRSTUVWXYZ ABCDEFGHIJKLMNOPQRSTUVWXYZ	1234 6789

Typestyle Samples and Pitches - U.S.

12 Pitch

Δ Adjutant 1353047	ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz	12345 67890
Δ Artisan 1353050	ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz	12345 67890
Δ Auto Elite 1353080	ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz	12345 67890
Δ Courier 12 1353523	ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz	12345 67890
Δ Courier 12 Italic 1353890	ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz	12345 67890
Δ Dual Gothic 1353055	ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz	12345 67890
Δ Elite 1353861	ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz	12345 67890
Δ Letter Gothic 1353514	ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz	12345 67890
Δ Light Italic 1353764	ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz	12345 67890
Δ Olde World 1353875	ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz	12345 67890
Δ Prestige Elite 1353502	ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz	12345 67890
Δ Script 1353778	ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz	12345 67890

Typestyle Samples and Pitches - U.S.

15 Pitch

■ Courier 15 1353796	ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz	12345 67890
■ Gothic 15 1353719	ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz	12345 67890
■ Prestige 15 1353655	ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz	12345 67890

Proportional Spacing

● Boldface 1353504	ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz	1234567890
● Boldface Italic 1353059	ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz	1234567890
● Essay 1353526	ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz	1234567890
● Essay Italic 1353750	ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz	1234567890
● Modern 1353517	ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz	1234567890
● Thesis 1353953	ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz	1234567890
● Title 1353952	ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz	1234567890

Draw

▲ Courier 10 Draw 1353264	ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz	123 678
△ Prestige Elite Draw 1353265	ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz	12345 67890
■ Courier 15 Draw 1353266	ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz	12345 67890

Typestyle Samples and Pitches - United Kingdom

10 Pitch

▲ Bookface Academic 1353046	ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz	12 67
▲ Courier 10 1353567	ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz	12 67
▲ Prestige Pica 1353583	ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz	12 67

12 Pitch

△ Courier 12 1353607	ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz	12345 67890
△ Letter Gothic 1353623	ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz	12345 67890
△ Light Italic 1353767	ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz	12345 67890
△ Prestige Elite 1353575	ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz	12345 67890
△ Script 1353781	ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz	12345 67890

Typestyle Samples and Pitches - United Kingdom

15 Pitch

■ Courier 15 1353800	ABCDEF GHIJKLMNOPQRSTUVWXYZ 12345 abc defghijklmnopqrstuvwxyz 67890
■ Prestige 15 1353683	ABCDEF GHIJKLMNOPQRSTUVWXYZ 12345 abc defghijklmnopqrstuvwxyz 67890
● Boldface 1353591	ABCDEF GHIJKLMNOPQRSTUVWXYZ 1 abc defghijklmnopqrstuvwxyz 34567890
● Essay 1353631	ABCDEF GHIJKLMNOPQRSTUVWXYZ 1 abc defghijklmnopqrstuvwxyz 34567890
● Title 1353041	ABCDEF GHIJKLMNOPQRSTUVWXYZ 1 abc defghijklmnopqrstuvwxyz 34567890

Legend:

- ▲ = 10 pitch
- △ = 12 pitch
- = 15 pitch
- = proportional spacing

Printwheel Application Recommendations

Typestyle	1-3 Carbon Copies	3-5 Carbon Copies	Stencils	Bold Print
10 Pitch:				
Advocate	A	A	A	C
Artisan 10	A	A	A	A
Bookface Academic	B	C	B	A
Courier 10	A	A	B	A
Delegate	A	A	B	B
Manifold	A	A	B	A
Pica	A	A	A	C
Prestige Pica	A	B	B	A
Rhetoric	B	C	B	A
Rhetoric Presentor	B	C	B	A
Symbol 10	B	C	C	B
12 Pitch:				
Adjutant	A	A	B	B
Artisan 12	A	A	B	A
Auto Elite	A	A	A	A
Courier 12	A	A	B	A
Courier 12 Italic	A	A	B	A
Dual Gothic	A	B	B	C
Elite	A	A	A	C
Large Elite	A	A	A	C
Letter Gothic	A	A	B	A
Light Italic	A	A	A	B
Olde World	A	C	NR	A
Prestige Elite	A	B	A	A
Scribe	A	A	A	B

Typestyle	1-3 Carbon Copies	3-5 Carbon Copies	Stencils	Bold Print
Script	B	C	C	A
Symbol 12	C	C	C	B
15 Pitch:				
Courier 15	A	B	B	A
Gothic 15	B	C	B	A
Prestige 15	A	B	A	C
Symbol 15	C	C	C	B
PS Pitch:				
Boldface	B	C	B	A
Boldface Italic	B	C	B	A
Essay	A	B	B	A
Essay Italic	A	B	B	A
Modern	A	B	B	A
Thesis	A	B	B	A
Title	A	B	B	A

Ratings:

A—Good; B—Fair; C—Marginal; NR—Not Recommended
(Based on proper selection of ribbon, carbon paper, and stencils)

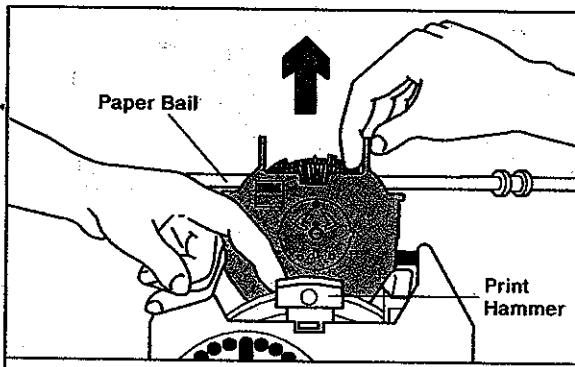
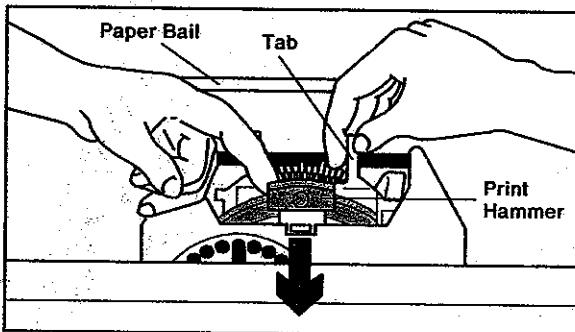
Note: There are three symbol printwheels: Symbol 10, Symbol 12, and Symbol 15. For best results, use a symbol printwheel that matches the pitch of your regular printwheel.

Changing the Printwheel

CAUTION:

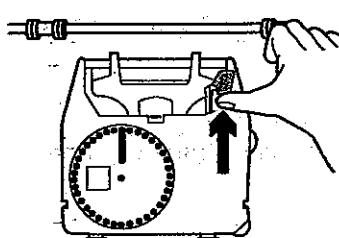
To prevent unwanted carrier motion, make sure the Paper Ball Load Lever is in the closed position.

1. Pull the print hammer all the way forward and hold it.
2. Grasp the printwheel tab and lift the printwheel straight up and out of the slot. Do not scratch the ribbon.

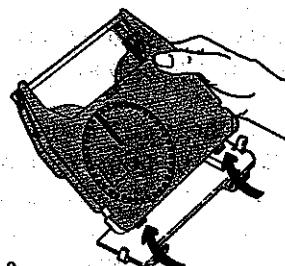


3. Release the print hammer.
4. If the replacement printwheel is new, remove the yellow shipping seal from its center.
5. Hold the printwheel so the letters IBM are in the upper left corner.
6. Pull the print hammer all the way forward and hold it.
7. Lower the printwheel into the slot. Do not scratch the ribbon.
8. Release the print hammer.
9. Press the Code key. The printwheel spins.

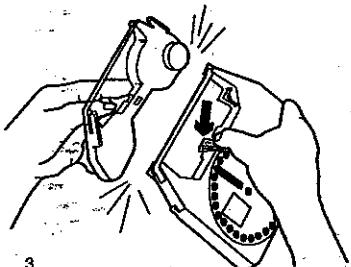
Ribbon Removal and Installation



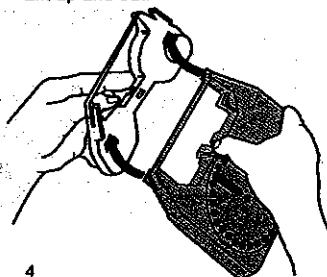
1 Push blue lever.



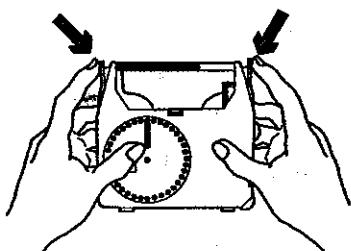
2 Lift up and out.



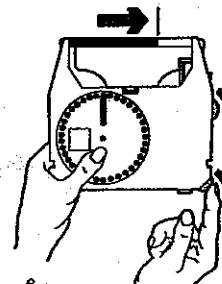
3 Separate 2 cassettes.



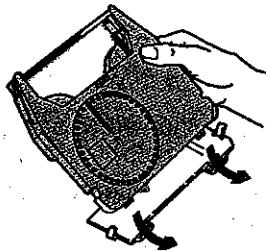
4 Slide cassettes together.



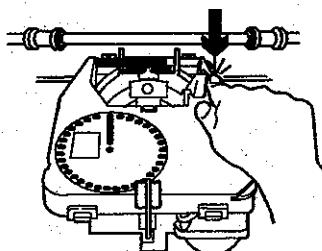
5 Press gray tabs.



6 Advance tape.



7 Slide into typewriter.



8 Press down firmly.

IBM Easystrike® Ribbons

Applications	Multipurpose	High ¹ Yield Correctable	Fabric	Superior ² Write Correctable
Correspondence				
Legal	•	•	NR	•
Executive	•	•	NR	•
General	•	•	•	•
Hard-to-Image Originals ³	•	NR	•	•
OCR	•	NR	NR	NR
Speech Writing ⁴	•	NR	•	•
Negotiable Instruments (checks and stocks)	•	NR	•	NR
Erasable Bond ³	•	NR	NR	•
Quality of Original				
1-3 Carbons	Good	Good	Good	Good
3-5 Carbons	Fair	Margin- al	Fair	Fair
Reorder Number	1337764	1299845	1356000	1380999
Correction Tape				
Lift-Off Tape—1337765		•	None	•
Cover-Up Tape—1337766	•		None	

• = Recommended NR = Not Recommended

The IBM Easystrike Correctable Ribbon Cassette is available in brown (1337762) and blue (1337763).

-
- 1 Long-life correctable film ribbon; recommended for general correspondence.
 - 2 Recommended for bold and dark print, especially on difficult-to-image papers.
 - 3 The receptivity of the surface of these materials varies widely; therefore, for best results, use care in selecting a specific material to be typed on, and in selecting typestyle, impression control, and ribbon. The IBM Easystrike Superior Write Correctable Ribbon is recommended for most hard-to-image applications. However, there are some special coated or treated surfaces where the multipurpose ribbon must be used. When in doubt, prepare samples first.
 - 4 Best results with Rhetoric and other large typestyle printwheels are obtained by using the IBM Easystrike Multipurpose Ribbon.

Batteries

The typewriter uses two size AA alkaline batteries to save stored jobs, margins, tabs, and other settings when you turn the typewriter off. Change the batteries at least once every year (before they run down). *Do not turn the typewriter off while replacing batteries.* If you do, stored information and settings will be lost.

The following settings are saved when you turn the typewriter off if good batteries are installed:

- Top Margin
- Active Format Area
- Line Space Setting
- Automatic Carrier Return On or Off
- Active Keyboard
- Spell Check Supplemental Dictionary
- Variable Right Margin Zone

Use only size AA alkaline batteries (for example, Duracell⁵ type MN 1500; Eveready⁶ type E91, Ray-O-Vac⁷ type 815, or equivalent). *Do not use rechargeable batteries.*

Checking the Batteries

If the beep sounds three times and the Line Space indicators (1, 1½, 2, 3) blink continuously when you turn the typewriter on, check the following while the typewriter is on.

1. Check the batteries for correct installation. If correctly installed, the batteries may be weak or dead.
2. Replace both batteries. *Do not turn the typewriter off while replacing batteries.* If you do, stored information and settings will be lost.

⁵ Trademark of Duracell, Inc.

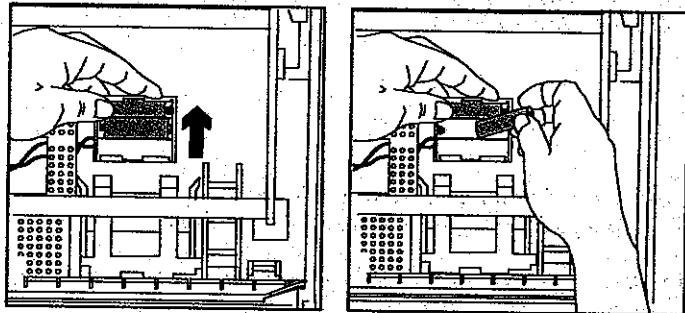
⁶ Trademark of the Union Carbide Corp.

⁷ Trademark of the Ray-O-Vac Corp.

Replacing Batteries

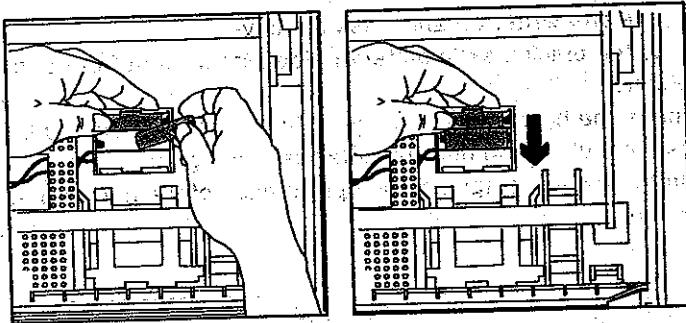
Warning: Do not turn the typewriter off while replacing batteries. If you do, stored information and settings will be lost.

1. Turn the typewriter on and raise the cover.
2. Locate the black plastic battery holder at the right front of the typewriter.
3. Remove the holder by putting your finger under it and pulling up. Carefully pull the holder out as far as it can go.
4. Push the batteries against the spring ends of the holder and pop them out.



5. Install two new batteries in the holder. Match the plus (+) signs on the batteries to the plus signs inside the holder.

- 6. Fold any excess wire into the empty slot of the battery holder.
Place the battery holder back in the typewriter.**



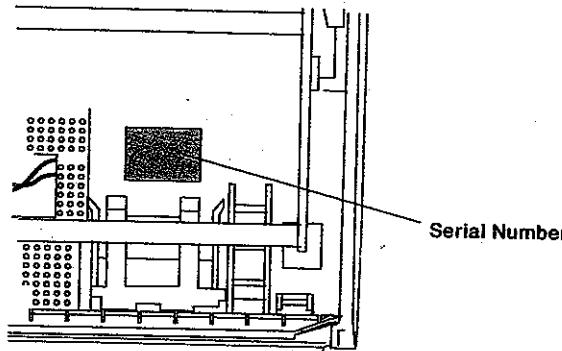
Notes:

1. The batteries will *not* save margins, stored jobs, and other settings unless each battery is properly installed.
2. The battery holder contains three openings. Be sure to place the batteries in **only** the two holder positions containing springs.

Cleaning the Typewriter Cover

Important: Use only a damp cloth and mild detergent to clean the typewriter cover and keybuttons. Certain cleaning fluids may be harmful. *Do not use IBM cleaning fluid.*

Serial Number



To locate the serial number on your typewriter, look on the right side of the inside bottom cover. The serial number is on the voltage label behind the batteries. Machine type and model number are also on this label.

Intentionally removing, destroying or altering the Lexmark serial number may be a violation of consumer laws. Further, Lexmark will not honor warranty claims for machines without the original factory affixed serial number label similiar to the one shown below:

LEXMARK™

Manufactured by Lexmark International Inc.
Lexington, Ky USA

Machine Type:

100-240v.~

SN:

50/60Hz

0.8-0.4A

Programs © Copyright Lexmark International, Inc.
All Rights Reserved 19xx.19xx



HOMOLOGA
D.G.E.L
GMC-0040

This device complies with part 15 of the FCC Rules. FCC ID:XXXXXX

Operation is subject to the following conditions:

- (1) This device may not cause harmful interference.
- (2) This device must accept any interference that may cause undesired operation.

Problem Determination

This chapter describes problems or questions you may have while using your typewriter. Use this chapter to correct problems yourself, saving service costs and avoiding unnecessary downtime.

The indicator light panel to the right of the keyboard shows you if a function is on or off and also if operator action is required.

Note: See "Indicator Lights" on page 1-7 for a description of many common indicator light signals.

1. Find the problem in the "Problem Determination Index" on page 7-2 and turn to the page referenced.
2. Complete as many steps as needed to correct the problem.
3. For assistance, contact an authorized dealer. You will need serial number, machine type, and model number when you call. See "Serial Number" on page 6-15 for location of this information.

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Beep and Indicator Signals

Beeper Signals Three Times and the Store Indicator Blinks

Storage is almost full (less than 100 characters.) Do not continue to type. You must create more space if you want to store the remainder of the job. See "Storage Full Warning" on page 3-17. However, if you do not want to continue to store, press **Store**.

Beeper Signals Each Time You Press a Key and the Store Indicator Blinks

Storage is full. Delete one or more storage areas or press **Store** to close storage. If you press **Store**, reposition the carrier to the last typing position and continue typing. See "Storage Full Warning" on page 3-17 for more information.

Beeper Signals Three Times and the Store Indicator Does Not Blink

There is not enough memory to copy the entire job. You must create more space by deleting unneeded storage areas (see "Deleting a Stored Job" on page 3-17).

Typewriter Beeps Three Times and Line Space Indicators Blink

If the typewriter beeps three times and the **Line Space** indicators blink when the typewriter is turned on, there is a possible battery problem.

1. If all the **Line Space** indicators blink together, the batteries have failed and machine settings have been lost.
2. If the **Line Space** indicators blink in sequence, (1, 1½, 2, 3), the batteries are low, but no machine settings have been lost.
3. If the **Line Space 1** and **3** indicators blink followed by the **Line Space 1½** and **2**, the batteries are good, but the machine settings have been lost.

For either 1 or 2, do the following while the typewriter *is on*.

- Check the batteries for correct installation.
- If the batteries are installed correctly, replace *all* batteries. Do not turn the typewriter off while replacing the batteries or margins and other settings will be lost.

For 3, you will have to re-enter your desired machine settings.

Typewriter Beeps Six Times and One or More Indicators Blink

1. Make sure the printwheel and ribbon are installed correctly.
2. Turn the typewriter off, then on again. If the problem recurs, install another printwheel.
3. Turn the typewriter off, then on again. If the problem recurs, call for service.

All Indicators Stay On

Turn the typewriter off, wait 30 seconds, then turn the typewriter on again. If all the indicators are still on, call for service.

No Indicators Come On

1. Make sure the typewriter cord is securely plugged into the back of the typewriter and into a wall outlet.
2. Make sure other equipment plugged into the same wall outlet works.
3. Make sure the wall outlet does not turn off with the room lights.
4. Turn the typewriter off, then on again.

All Lights Off Except Line Spacing 3 Blinking

The typewriter is in an energy saving mode. Press any key to continue typing. See "PowerWise Mode (U.S. Only)" on page 1-21.

Typing Problems

Typewriter Operates Hot

1. Make sure nothing is blocking the typewriter vents.
2. Place the typewriter at least 75 mm (3 in) from the wall on all sides.
3. Make sure the typewriter is not near a heater.

Typewriter Operates Loudly

1. Make sure the cover and soundhood (if you have a soundhood) are closed tightly.
2. Move any objects touching the typewriter cover.
3. Look for objects in the typewriter.
4. Remove any material placed under the typewriter.
5. Check the typing table or desk. Metal tables can make the typewriter sound noisy.

Line Spacing Aligns Incorrectly

1. Look for objects inside the typewriter.
2. Look at the number of carbon copies used (five maximum).
3. Push the *Paper Release Lever* all the way back.

Paper Feeds Incorrectly

1. Check the number of carbon copies used (five maximum).
2. Make sure carbon copies are correctly inserted.
3. Look for labels or paper caught under the platen.
4. Push the *Paper Release Lever* all the way back.
5. Make sure the platen is latched down at both ends.
6. If you change the top margin setting at any time, check it before feeding paper. See "Changing the Top Margin" on page 2-5.

Wrong Characters Print or Space Incorrectly

1. Turn the typewriter off, then turn the typewriter on again and try typing.
2. Turn the **Lang** indicator off if it is on. (Alternate Keyboard may have been selected accidentally.)
3. If there is a language change, change the printwheel.
4. Look for objects in the path of the carrier.

Erase Problems

Correction Key Does Not Completely Erase Character

1. Make sure the ribbon and correction tape cassettes are fastened together correctly.
2. Make sure the correction tape matches the ribbon. Make sure the ribbon and correction tape cassettes are correctly installed.
3. Try a lighter impression control setting.
4. Try a new correction tape and type any character to reset the correction system.
5. Look for folds in the paper.
6. Try plain bond paper.
7. Make sure the typewriter is on a level surface.
8. Use the same printwheel for both typing and erasing.
9. Turn Bold Print on if erasing bold characters.

Typewriter Beeps Instead of Erasing

You are trying to erase using the wrong pitch or language. If the Lang indicator is not blinking, install the correct pitch printwheel. If the Lang indicator is blinking, select the correct language keyboard and install the correct printwheel.

Printwheel Spins Instead of Erasing

The character is outside the correction memory and you must erase it manually.

Print Problems

Characters Do Not Print

1. Make sure you are using the correct pitch or language.
2. Make sure the printwheel and ribbon are installed correctly.
3. Make sure the platen is latched down at both ends.
 - Pull the *Paper Release Lever* all the way toward you.
 - Push down firmly on each end of the platen. Then push the *Paper Release Lever* all the way back.
4. Try a new ribbon or printwheel.

Characters Print Too Lightly

1. Make sure the ribbon is installed correctly.
2. Look for folds in the ribbon and paper.
3. Change the impression control. See page 1-14.
4. Try plain bond paper.
5. Try a new ribbon or printwheel.

Characters Do Not Print Clearly

1. If excess ink particles from the ribbon appear on the paper, try a lower impression control setting.
2. Try a new ribbon or printwheel.

Characters Print Incorrectly During Play

1. Use the same pitch printwheel used when the text was typed.
2. Insert another sheet of paper and play the text again.

Spell Check Problems

If Spell Check does not work, one of the following might cause the problem:

- Spell Check is turned off.
- Another typewriter function is active which prevents Spell Check from operating (for example, the Printer Option).
- You did not follow the word with a space or punctuation.
- You are trying to add a word that is already in a dictionary.
- You are trying to delete a word from the *main* dictionary.

Spelling Beep Sounded Three Times When You Turned the Typewriter On

There was a supplemental dictionary error and the dictionary has been erased from memory. If you selected a spelling beep tone, it is erased from memory and will have to be selected again.

Typewriter Beeped Five Times and Line Space Indicators Are Blinking

Check the probable causes of a Spell Check problem above. If the problem is not corrected, contact an authorized dealer.

Appendix A. Safety/Compliances

Federal Communications Commission (FCC) Statement

Note: The IBM Wheelwriter Typewriter has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful 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 or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult your authorized dealer or service representative for additional suggestions.

Neither IBM nor the manufacturer is responsible for any radio or television interference caused by using other than recommended cables or by unauthorized changes or modifications to this equipment. Unauthorized changes or modifications could void the user's authority to operate the equipment.

Note: To comply with FCC regulations on electromagnetic interference for a Class B computing device, the printer cable must be shielded and properly grounded.

To assure compliance with FCC regulations for a Class B computing device, use a properly shielded and grounded IBM cable. Part number 1043561 is for the parallel interface cable. Use of a substitute cable not properly shielded and grounded may result in violation of FCC regulations.

Canadian Department of Communications Compliance Statement

This equipment does not exceed Class B limits per radio noise emissions for digital apparatus, set out in the Radio Interference Regulation of the Canadian Department of Communications.

Avis de conformité aux normes du ministère des Communications du Canada

Cet équipement ne dépasse pas les limites de Classe B d'émission de bruits radioélectriques pour les appareils numériques, telles que prescrites par le Règlement sur le brouillage radioélectrique établi par le ministère des Communications du Canada.

The United Kingdom Telecommunications Act 1984

This apparatus is approved under the General Approval Number NS/G/1234/J/100003 for the indirect connections to the public telecommunications systems in the United Kingdom.

European Community (EC) Electromagnetic Compatibility Directive

This product is in conformity with the protection requirements of EC Council directive 89/336/EEC on the approximation of the laws of the Member States relating to electromagnetic compatibility.

Safety Information

- If your product is NOT marked with this symbol,  , it MUST be connected to an electrical outlet that is properly grounded.
- The power cord must be connected to an electrical outlet that is near the product and easily accessible.
- Refer service or repairs, other than those described in the operating instructions, to a professional service person.

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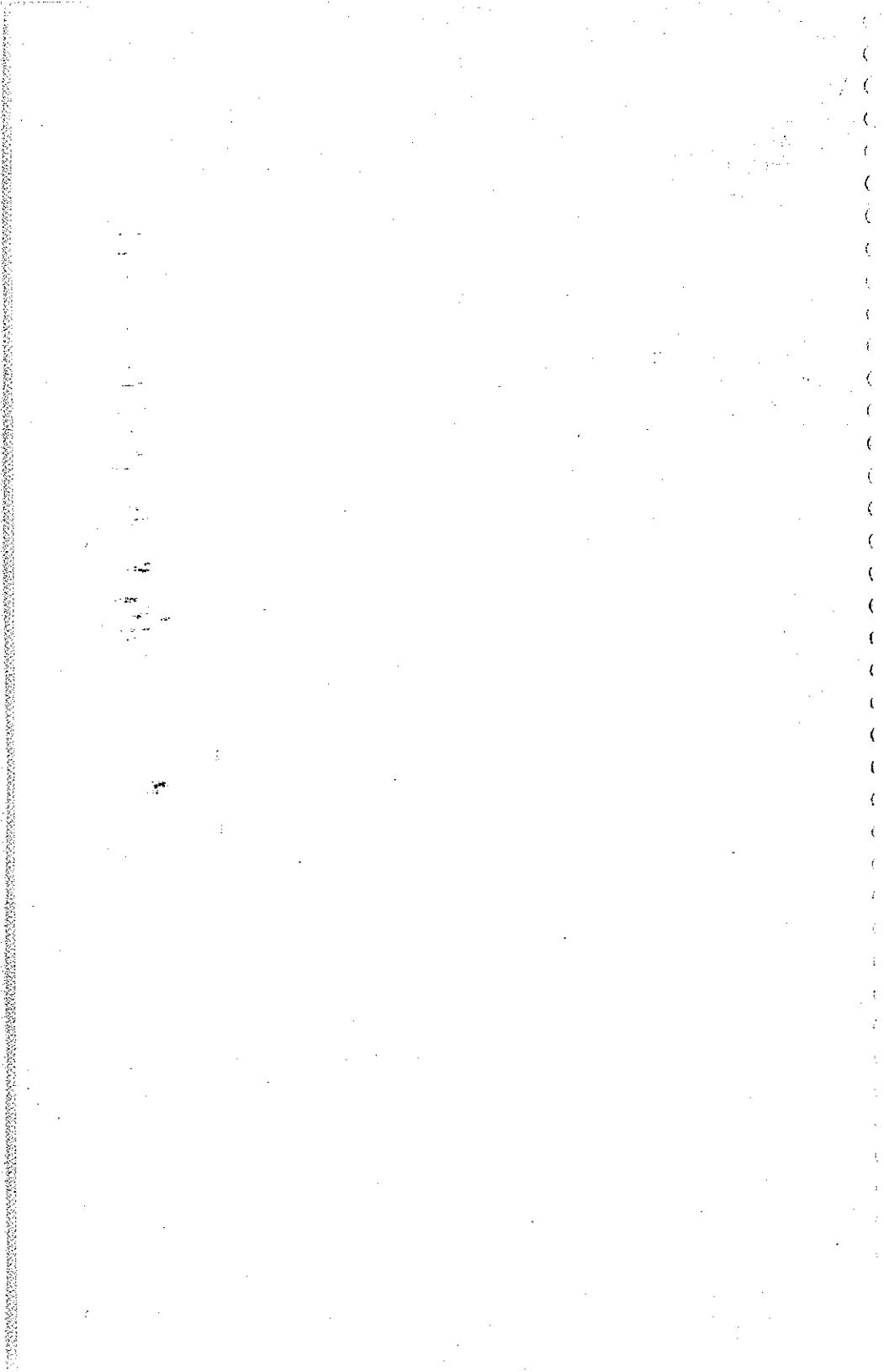
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