IBM
WHEELWRITER 1500
BY LEXMARK

User's Guide

LEXMARK

REFERENCE	
Dealer Name	
Dealer Phone Number	

PRODUCT INFORMATION	
Typewriter Name	IBM Wheelwriter 1500
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 3-15.

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® 1500 Typewriter.

The function applications of Envelopes, Labels, and Enhanced Forms
were designed with you in mind. Along with standard functions such
as Word Underline, Word Erase, Spell Check, Column Layout, Draw,
and Variable Information Reprint, your IBM Wheelwriter 1500 type-
writer will give you excellent typing quality and make your work more
enjoyable.

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

The Reprint function allows you to correct a full page of text and then
print a final copy. Draw allows you to draw boxes, horizontal lines,
and vertical lines. Column layout allows you to evenly space
columns of text or numbers. The Format function allows you to store
sets of tabs and margins.

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 1500 Typewriter by adding
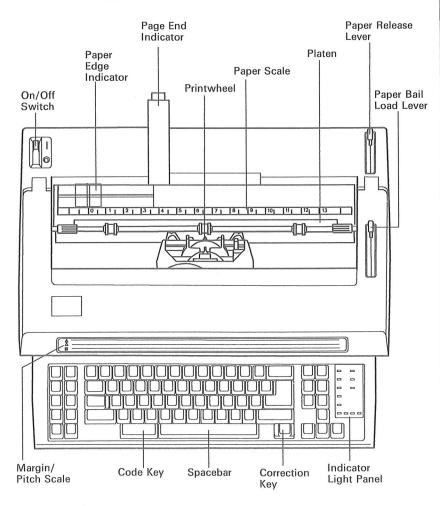the following options:

- Printer Option
- Sound Hood.

Contents

Basic Operations

Parts of the Typewriter

On/Off Switch — Paper Edge Indicator — Page End Indicator — Printwheel — Paper Scale — Platen — Paper Release Lever — Paper Bail Load Lever

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |

Margin/ Pitch Scale — Code Key — Spacebar — Correction Key — Indicator Light Panel

Keyboard Layout - U.S.

Keyboard Layout - United Kingdom
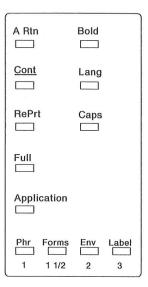
Keyboard Legend
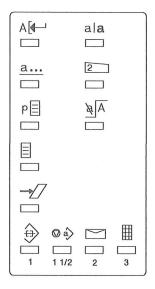
Abbreviation	Function/Action	Symbol
Frmat	Format	FMT⟩
Dir	Directory	🗐◇
Mar Rel	Margin Release	⊣[⊢]⊩
LMar	Left Margin	⊢—
RMar	Right Margin	—⊣
TSet	Tab Set	T+
ColL	Column Layout	⊩⊩⊩
TClr	Tab Clear	T–
Zone	Variable Right Margin Zone	K⟩
Tab	Tab	—⊪
IndL	Indent Left	⊢→⊪
Lock	Shift Lock	⊕
Impr	Impression Control	⌒oo⌒
DecT	Decimal Tab	Dec ⊪
Ctr	Centering	|•|
ARtn	Automatic Carrier Return	A⊣—⌐
Bold	Bold Print	a|a
½ ↑	Superscript	½ ⊥̅
½ ↓	Subscript	½ ⊤̲
Caps	Caps	⧘√A̅
Cont	Continuous Underline	a̲.̲.̲.̲
Mark	Mark	⊘ a
Word	Word Underline	a̲a̲a̲
Stop	Stop	⊘
RFlsh	Right Flush	aaa-⊪
Lang	Alternate Keyboard	▭2▱
Draw	Draw	◤▱
Backspace	Backspace	⊪⊣—⌐
Bksp 1	Backspace - Micro	⊪⊣¹
CRtn	Carrier Return	⊢—⌐

Abbreviation	Function/Action	Symbol
Ind Clr	Indent Clear	⊩⌐┘
⟨×⟩	Correction	⟨×⟩
⟨×⟩ **(Word)**	Correction - Word	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
ExLsp	Expand Line Spacing	⊼⌄
ExPrt	Expand Print	aa a
Jstify	Justified Reprint	⊩a⇥
Envlp	Envelope	◻
Label	Label	▦
Forms	Forms	⊘⅋
Reprt	Reprint	P▤
Phrs	Phrase	⬦
Page Eject	Page Eject	⊡
Spell Check		
Spell	Spell Check On/Off	▭
Add	Add a Word to the Dictionary	+▦
Del	Delete a word from the Dictionary	-▦
Vol	Spell Check Volume	⊲·))

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:

A Rtn	Bold		
Cont	Lang		
RePrt	Caps		
Full			
Application			
Phr	Forms	Env	Label
1	1 1/2	2	3

A	a|a		
a...	2		
P	A		
1	1 1/2	2	3

Indicator Lights

Indicator Name	Description	Page
	Indicator On	
ARtn	Automatic Carrier Return on	2-1
Bold	Bold Print on	2-14
Cont	Continuous Underline on	2-8
Lang	Alternate Keyboard on	2-54
RePrt	Reprint Active	2-24
Application	Forms, Phrase Playout,Envelope or Label Fill Out In Progress	2-30 2-39 2-42 2-46
Full	Area (Reprint full, Forms, Phrase, Label)	2-24 2-30 2-39 2-46
Caps	Caps on	1-17
1, 1½, 2, 3	Line Spacing	1-14
	Indicator Blinking	
ARtn	Justification on, Column Layout on	2-26, 2-19
Lang	Select Alternate Keyboard	2-55
RePrt	Stop Code - Variable Information Entry, Pitch Change	2-24
Full	Area (Reprint near full, Forms, Phrase, Label)	2-24 2-30 2-39 2-46
Caps	Shift Lock on	1-17
Application	Forms, Phrase, Envelope, Label creation mode	2-30 2-39 2-42 2-46
Phr	Phrase function active	2-39
Forms	Forms function active	2-30
Env	Envelope function active	2-42
Label	Label function active	2-46
1, 1½	Draw on	2-9
1, 1½, 2, 3	Low Battery	3-12
3	Saving Energy (PowerWise Mode)	1-24

Note: For other sequences of blinking indicator lights, see "Problem Determination" on page 4-1.

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** and **Paper Bail Load Lever** 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

Typematic (Repeat) Keys

Typematic keys have both a single and *repeat* action. Press a 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
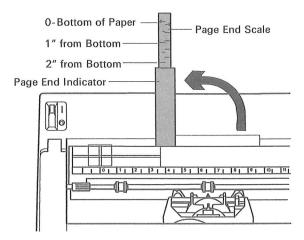
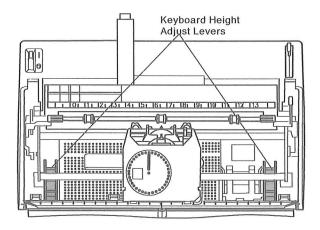### United Kingdom Keyboard

Page End Indicator and Scale

0- Bottom of Paper ——————
Page End Scale

1" from Bottom ——————

2" from Bottom ——————

Page End Indicator ——————

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 scale tells you approximately how much space remains to the bottom of 27.9 cm (11 in) paper. The left side of the scale is marked in inches.

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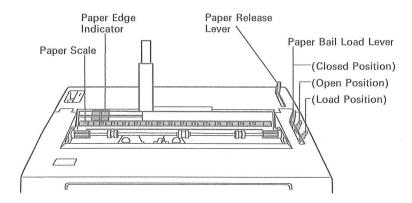
Keyboard Height Adjust Levers

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 type-
   writer.
2. Turn the typewriter off and raise the top cover.
3. Locate the two blue keyboard height adjust levers inside the type-
   writer 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.

Inserting and Removing Paper

Paper Edge Indicator — Paper Release Lever — Paper Bail Load Lever — Paper Scale

—(Closed Position)
—(Open Position)
—(Load Position)

Inserting Paper

Use the **Paper Bail 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 Bail Load Lever** to the load position. When the paper begins to feed, release the **Paper Bail Load Lever**. The paper feeds to the top margin position.
6. Push the **Paper Bail Load Lever** back until it holds the paper against the platen.

You can also use the **Paper Bail Load Lever** to change the top margin setting. See "Changing the Top Margin" on page 2-4.
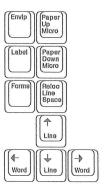
Removing Paper

1. Pull the **Paper Bail 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 Bail Load Lever** back to the closed position.

Note: See "Automatic Page Eject" on page 2-2 for another method of removing paper.

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 the 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 pre-
  vious 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** light 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.

Expand Line Space

Expand Line Space increases the line spacing defined by the currently installed printwheel.

Hold down **Code** while you press **E** (**ExLsp**) to activate Expand Line Space. The printwheel spins and the line spacing increases based on the values in the table below.

	Lines Per Inch 10/12/PS Printwheels		Lines Per Inch 15-Pitch Printwheels	
Line Space Setting	Standard	Expanded	Standard	Expanded
1	6	5.33	8	7.38
1 ½	4	3.56	5.33	4.92
2	3	2.67	4	3.69
3	2	1.78	2.67	2.46

Hold down **Code** while you press **Reloc (Line Space)** repeatedly to step through the line space settings. Expand Line Space lights only blink when Expand Line Space is activated and **Code** is held down. The table below lists the line space settings and their indicators:

Line Space Setting	Expand Line Space Lights (blinking)	Standard Line Space Lights (not blinking)
1	1	1
1 ½	1 ½	1 ½
2	2	2
3	3	3

Hold down **Code** while you press **E (ExLsp)** to deactivate Expand Line Space. The printwheel spins, and the lights return to standard mode.

Helpful Hints

- Expand Line Space does not work on metric typewriters. A beep sounds if you attempt to activate Expand Line Space on a metric typewriter.
- The Expand Line Space setting is saved when you turn the typewriter off.

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** light blinks.
2. Press either **Shift** key to return to normal typing. The **Caps** light goes off.

Note: Turning on the Caps function cancels the Lock function.

Caps Key

When Caps is on, *only* the 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** light comes on when Caps is on.

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** light comes on to indicate *light* impression.
- The **2 Line Space** light comes on to indicate *normal* impression.
- The **3 Line Space** light comes on to indicate *heavy* impression.
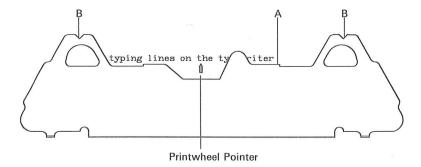
Type with the impression set at **1** to achieve the highest quality corrections, or change the setting to **3** to type carbon copies. When you turn the typewriter on, the impression control is automatically set to *normal*.

Cardholder

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

The printwheel pointer shows where the next character will print.

The top edge (A) of the cardholder indicates the base of the typing line. As the characters print, the bottom of each character rests just above the line.

Printwheel Pointer

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 2-9.

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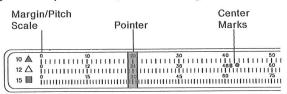
The typewriter automatically selects the correct pitch when you install a printwheel. Pitch determines the number of characters typed per horizontal inch.

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. See "Expand Print" on page 2-15.

Margin/Pitch Scale

The typewriter has three margin/pitch 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 215.90 mm (8.50 in) wide.

■ marks the approximate center of paper 210 mm (8.27 in) wide.

Margins and Tabs

For each setting, move the carrier to the desired point, and press the key(s) indicated:

- **LMar** to set the left margin.
- **RMar** to set the right margin.
- **MarRel** to release the left margin; then **Backspace** or ← to move left of the margin.
- **TSet** to set a tab. You can set up to 26 tabs. Permanent tabs exist at the left and right margins. You cannot clear these tabs.
- **TClr** to clear a tab.
- **TClr** + **CRtn** to clear all non-permanent tabs.

The typewriter beeps when the carrier is about five spaces from the right margin. See "Variable Right Margin Zone" on page 2-2. You can type or space through the right margin. See "Required Space" on page 2-7. Margin and tab settings are saved when the typewriter is turned off.

Erasing Automatically in 10, 12, and 15 Pitch

The typewriter has a correction memory of approximately 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* removing it from the typewriter. The correction memory is cleared if you:
- Turn your typewriter off.
- Use the **Paper Bail Load Lever** to insert paper and then type a character or a Stop instruction. Stop instructions are explained in Chapter 2. Typing causes previous text in memory to erase.

When the correction memory is nearly full, the typewriter beeps three times and the **Full** light blinks to indicate that the typewriter is about to lose text. If you continue typing and the **Full** light stays on, you have lost text from the beginning of correction memory.

Erasing a Character

Correction Key

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

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 1-22.

Erasing a Word

Hold down **Code** while you press the **Correction** key to erase an 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 eraes one or several characters.
                             |
           Position Printwheel Pointer Here

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

Helpful Hints

- If you use a proportional spacing printwheel, see page 1-23.
- If you use manual erase after reinserting your document, you cannot print additional copies. See "Reprint" on page 2-24.
- 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 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 *l* in the word *should*:

```
The letters shoud be
The letters        be
The letters should be
```

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 (see page 1-21) 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.

Example

$$\boxed{\text{T}\,|\text{i}|\text{m}|\text{e}}$$

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)

Energy Conservation System

POWERWISE

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** light comes on when you turn Automatic Carrier Return on.

Practice
Insert a 12-pitch printwheel, then set **LMar** 24 and **RMar** 65. Type the paragraph below with Automatic Carrier Return on.

Just keep typing and you will see when
your new typewriter automatically returns
the carrier for you.

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** light stays on.

Automatic Page Eject

Any time you wish to eject a sheet of paper, form, label sheet, or envelope from your typewriter, hold down **Code** while pressing the **Page Eject** key. The tabs, margins, and other items that you have set will not change.

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. 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, 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.
- To reset the variable right margin zone to the standard setting for the selected keyboard, hold down **Code** while you press **TClr (Zone)**.

Practice

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

- With Automatic Carrier Return on (standard setting is 5 or 6):

```
                                                Right Margin
                                                     |
      Try using this function with your new typewriter.
                                                  |___|
```

                                                     5

- With Variable Right Margin Zone set to 9:

```
                                          Right Margin
                                               |
      Try using this function with your new
      typewriter.                        |_____|
```

                                          9

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

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. Always use the **Paper Bail Load Lever** to insert a sheet of paper. An incorrect top margin position results if you do not use the **Paper Bail Load Lever**.
2. Position the paper at the desired new first writing line.
3. Hold down **Code** while you pull the **Paper Bail Load Lever** forward. The printwheel spins as the top margin is set.
4. Push the **Paper Bail 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 Bail Load Lever** forward.

Format

A format is a set of margins and tabs; for example: left margin 20; right margin 80; right margin zone 10 spaces; tabs 30 and 40. The Format function allows you to save up to nine sets of formats for different kinds of jobs. Use these formats for jobs you type frequently, such as memos, reports, envelopes, and statistical charts.

Setting or Changing a Format

1. Hold down **Code** while you press **F** (**Frmat**) and type **the number** (**1** through **9**) of the desired format.
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 you selected.

Selecting a Format
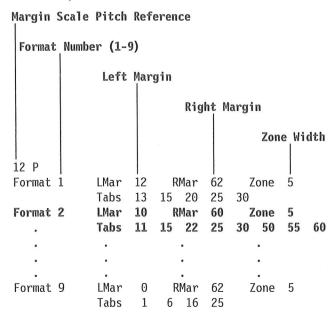
1. Hold down **Code** while you press **F** (**Frmat**) and type **the number** (**1** through **9**) of the desired format area.
2. Release the keys.
3. Type the job.

Printing the Format

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

1. Hold down **Code** while you press **F** (**Frmat**) and type **0**.

   When you release **Code**, 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
 |          |          |          |
 |          |          |          |      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, then ejects the page.

Note: The Reprint function (**RePrt**) should be used after printing a format to restore the correction memory.

Practice

Set the Formats found on the previous page and then type the following example (see "Indenting" on page 2-16):

Code+F+1

LMar 12   RMar 62
| |

 The Indent function allows you to change your margin
 within a job. A margin may be moved outside or
 inside its original setting.

Code+F+2

   Tab 22
    |

    "If you wish to change either the left
    or right or both margins after you
    have started a job, you can use the
    Format function to make the change."

Code+F+9

 Tab 16
  |

  Always use the Indent function to make left
  margin changes to your job.

Helpful Hints

- Formats are saved when you turn the typewriter off.
- The current format remains active when you turn the typewriter off.
- Temporary left 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.
- Use the 12 pitch margin scale for proportional spacing.

Required Space

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

Words typed *without* required spaces:

Victoria's birthday is January
22, 1988.

Words typed *with* required spaces:

```
              Code + Spacebar     Code + Spacebar
                             |   |
Victoria's birthday is January 22, 1988.
                               |
                      Right Margin
```

Typing a Required Space

1. When the right margin beep sounds as you near the right margin, finish the word you are typing, then hold down **Code** while you press the **Spacebar**.
2. Type the next word. Type required spaces between all words you want kept together.
3. When you type the last word you want on the line, press the **Spacebar**, then continue typing.

Underlining

Continuous Underline
1. Hold down **Code** while you press **U** (**Cont**) to begin underlining. The **Cont** light 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** light goes off.

Word Underline
1. Type the word you want underlined.
2. Hold down **Code** while you press **I** (**Word**). Word Underline goes off after underlining the word.
   - The carrier may be positioned at any character in a word or the space following the word when Word Underline is used.
   - The carrier backs up to the first character in the word and underlines the entire word.
3. Type the space following the word and repeat the steps for each word you want underlined.

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 lights 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 what to draw 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)                    ←Start (Code + Draw)
       ↓
      ___
       ↑
     End (Code + Draw)                 ← End (Code + Draw)
```

Note: Lines and boxes created using the Draw function cannot be erased automatically, nor can they be printed using the Reprint function.

- 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 Draw (009) printwheel is installed (see "Using Alternate Keyboards" on page 2-54), 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 lights 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.

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

Canceling Draw

Draw can be cancelled before printing by pressing the **Correction** key or pulling the **Paper Bail Load Lever** forward.

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. (Pressing **CRtn**, **Tab** or **DecT** also causes text to print.)

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.

Cancelling Centering

Centering can be cancelled if no characters have been typed by pressing the **Correction** key or pulling the **Paper Bail Load Lever** forward.

If characters have been typed:

1. Erase all the characters with the **Correction** key.
2. Hold down **Code** while you press **C (Ctr)**.

Right Flush

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

Date

Your Name

XYZ Corporation
740 Anytown Road
Anytown, USA 00110
123-4567

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** (**RFlsh**).
3. Type the text. The carrier backs up but does not print.
4. Hold down **Code** while you press **O** (**RFlsh**). The text aligns and prints to the right margin. (Pressing **CRtn**, **Tab**, **DecT**, or pulling the **Paper Bail Load Lever** forward also causes text to print.)

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 (RFlsh)**.
3. Type the text.
4. Hold down **Code** while you press **O (RFlsh)**. 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.
- 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 (Micro)**, **Paper Down (Micro)**, ↑, ↓, and **Backspace** keys do not work while Right Flush is on.

Subscripts and Superscripts

Subscripts print *below* the typing line (for example, $CuSO_4$ Super-scripts print *above* the typing line (for example, *Happy Living* [5]).

Typing Subscripts

Hold down **Code** while you press **H** (½ ↓). 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** (½ ↑). 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

- You cannot underline subscripts and superscripts automatically. You can underline them manually using the **Underline/Hyphen** key.
- Do not use paper movement keys to type subscripts or super-scripts.

Bold Print

Hold down **Code** while you press **B** (**Bold**) to turn Bold Print on or off. The **Bold** light 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 3-7.

Expand Print

Expand Print allows you to increase the space occupied by each character by one to four 1/60-inch (.0167 in) increments.

Use the Expand feature to add emphasis to words, headings, or page titles. Expand print can be both lower and upper case.

Note: Spelling is not checked during Expand Print.

Example of expand print 1

Example of expand print 2

EXAMPLE OF EXPAND PRINT 3

EXAMPLE OF EXPAND PRINT 4

Hold down **Code** and press **P** (**ExPrt**) and **a number** (1 through 4). The printwheel spins. The number you type determines the number of units to add to each character.

When you hold down **Code** after activating Expand Print, the line space lights blink as follows to indicate the active increment:

Expand Units	Lights Blinking
1	1
2	1½
3	2
4	3

Hold down **Code** while you press **P** (**ExPrt**) and **0** to turn off Expand Print.

Helpful Hints

- You can use Expand Print while using Centering, Right Flush, Decimal Tabulation, or normal typing.
- The Expand Print setting is not saved when you turn the typewriter off.
- You cannot use Expand Print in Column Layout or with a PS printwheel installed.
- Overstrikes are not allowed in Expand Print.
- Printing slows during Expand Print.

Indenting

The Indent function allows you to set a temporary left margin either inside or outside the current left margin. The temporary margin remains active until you clear the Indent function or change formats.

Example

```
Your new typewriter is designed to
make typing easier and more enjoyable.
```

Temporary
Left Margin

```
 |For example, centering, underlining,
  and indenting are done automatically
  on this new typewriter. |
                         Code + CRtn
Try using these new functions to help
you with your work! |
                    CRtn
```

1. At the *first* line you want indented, move the carrier to the desired position, then hold down **Code** while you press **Tab** (**IndL**) to set a temporary left margin.
2. Type the indented lines. The carrier returns to the temporary left margin after each line is typed.
3. Hold down **Code** while you press **CRtn** (**Ind Clr**) to clear the temporary left margin. The carrier returns to the original left margin.

Note: The Indenting function can also be used to set a temporary left margin to the *left* of the permanent left margin setting.

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 moves backward 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 moves backward 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.

Underlining Numbers in a Column
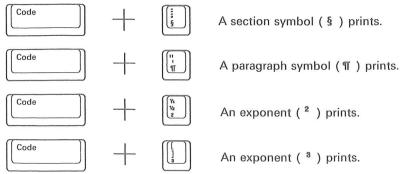
1. Before typing the *last line* of the columns, hold down **Code** while you press **U** (**Cont**) to turn Continuous Underlining on.
2. Hold down **Code** and press **D** (**DecT**) to move to the first tab stop.
3. Press **Spacebar** to type underlined spaces before the number.
4. Type the number.
5. Hold down **Code** and 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** *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**.

Special Characters (U.S. Keyboard Only)

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

Code	+	⧉	A section symbol (§) prints.

A section symbol (§) prints.

A paragraph symbol (¶) prints.

An exponent (²) prints.

An exponent (³) prints.

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.

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 (ColL)**. The printwheel spins and the **ARtn** light 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 (ColL)** to exit Column Layout mode. The **ARtn** light 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)

Insert a 12-pitch printwheel, then set **LMar** 12 and **RMar** 60. Do the following:

1. Press **Code** + **TSet** (**ColL**).
2. Type San Francisco, CA, then press **Tab**.
3. Type French Quarters, then press **Tab**.
4. Type money, then press **Tab**.
5. Press **Code** + **TSet** (**ColL**).
6. Type the text below. Tab between entries and press **CRtn** at the end of each line.

The first column starts at the left margin. Tabs are set as shown below:

```
LMar 12                    Tab                   Tab
   |                        |                     |
   New York, NY            Wall Street           money
   San Francisco, CA       Haight-Ashbury        art
   New Orleans, LA         French Quarters       food
```

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** (**ColL**). The printwheel spins and the **ARtn** light 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** (**ColL**) to exit Column Layout mode. The **ARtn** light 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)

Insert a 12-pitch printwheel, then set **LMar** 12 and **RMar** 60. Do the following:

1. Press **Code** + **TSet (ColL)**.
2. Type 5432.136, then press **Code** + **D (DecT)**.
3. Type 7630, then press **Code** + **D (DecT)**.
4. Type 3109.273, then press **Code** + **D (DecT)**.
5. Press **Code** + **TSet (ColL)**.
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:

DecT	DecT	DecT Right Margin
386.02	145	14.103
29.1	7630	202.54
5432.136	21	3109.273

Helpful Hints

- The following keys are valid in Column Layout:
    - letters
    - numbers
    - **Spacebar**
    - **Correction**
    - **Code** + **Correction (Word)**
    - **Tab**
    - **Code** + **D (DecT)**
    - **Code** + **TSet (ColL)**.

    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 (ColL)** 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 2-16) to set a temporary margin.

Stop Code

When to Use a Stop Code

Reminder to Turn Automatic Carrier Return Off and On
Type a stop code at any point where you want to turn Automatic Carrier Return off (for example, for tables, columns, or form areas). Type another stop code at the point where you want to turn Automatic Carrier Return on again.

Reminder to Turn Justification On or Off
Type a stop code before any portion of text that you want justified. Type another stop code at the point where you want to turn justification off.

Reminder to Change Line Spacing
Type a stop code at any point 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.

Variable Information Reprint
Type a stop code at each point where variable information should print. Variable information is text that changes with each reprint (for example, date and inside address).

Reminder to Change Printwheel

When typing, 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 text.

Typing a Stop Code

Hold down **Code** while you press **9** (**Stop**) to insert a stop code.

```
Code + C                        Code + C
|        Code + 9       Code + 9         |
|        |              |                |
IBM  "Wheelwriter" Typewriter
```

As the text prints, the typewriter stops at the stop code. For centered, right flush, and decimal tab text, press any key to resume printing. To resume printing after entering variable text, press **RePrt**.

Reprint

The Reprint function (**RePrt**) allows you to print additional copies of a single page. The maximum length of the page to be reprinted is determined by the pitch and format used.

Bidirectional Reprint

When you reprint text stored in the correction memory, the text prints bidirectionally (the first line prints left to right, the second line prints right to left, and so forth). Lines containing stop codes, pitch changes, keyboard changes, tabs, and bold characters are printed left to right only. The last line of text will also only print from left to right.

Typing the Original

1. Insert paper using the **Paper Bail Load Lever**. This prepares your typewriter for new text. Do not use the **Paper Up** or ↓ keys to insert the paper.
2. Type the text. If the typewriter beeps three times and the **Full** light blinks while you are typing, your page is nearly full. Complete the current line, make corrections, and reprint. If you continue typing and the **Full** light comes on solid, the correction memory is full and you have lost text.

Correcting Text

You can correct errors automatically while typing text *or* after reprinting is complete.

- Proofread the copy *before* removing it from the typewriter. Move the carrier to the error you want to correct and erase it. See "Erasing Automatically in 10, 12, and 15 Pitch" on page 1-21.
- If you remove the paper from the typewriter before making corrections, follow the instructions in "'Starting Reprint' on page 2-25," steps 1 through 3. You must wait until the reprint is complete before making corrections.

Note: If you use manual erase after reinserting your document, the correction memory is cleared and you cannot print additional copies.

Starting Reprint

1. Insert paper with the **Paper Bail Load Lever**. *Do not* begin typing new text. New text will replace the text you want to reprint.
2. Position the paper on the line where you want to begin reprinting.
3. Press **RePrt** to start reprinting. The **RePrt** light comes on. When your copy is printed, the **RePrt** light goes off. To correct errors, you must finish reprinting and then use the paper movement keys to move back to the text you want to correct.
4. Remove the paper using the *Paper Release Lever*.
5. Repeat steps 1 through 4 for additional copies.

Interrupting and Resuming Reprint

1. Press any key to *stop* reprinting. The **RePrt** light blinks when printing is stopped. Reprint stops automatically at stop codes and for printwheel pitch and language changes.
2. Press **RePrt** to *resume* reprinting.

Canceling and Restarting Reprint

Pull the **Paper Bail Load Lever** all the way forward to *cancel* Reprint. The **RePrt** light goes off, the paper moves up, and printing stops. You can reprint as many copies as you need by repeating the steps in "Starting Reprint."

Clearing Reprint

To clear Reprint, do *either* of the following:
- Type a character after the **Paper Bail Load Lever** has been pulled all the way forward.
- Turn the typewriter off.

Helpful Hints

- If you overstrike a character using a different printwheel of the same pitch, you will be unable to reprint the text correctly.
- Do not reprint text containing tables or columns with Automatic Carrier Return or Justification on (see 2-22).

Justification

Your typewriter can justify lines of text evenly at the right margin during Reprint.

Justifying An Entire Page During Reprint

Typing the original text:

1. Set left and right margins.
2. Turn Automatic Carrier Return on.
3. Type the text. Allow the typewriter to automatically return the carrier when typing near the right margin. Only press carrier return to end paragraphs or lines not to be justified.

Reprinting the entire page:

1. Hold down **Code** while you press **J (Jstify)** to turn Justification on. The printwheel spins when Justification is activated.
2. Start Reprint (see page 2-22). The **ARtn** light flashes during justified reprint.

The sample below was typed using **LMar** 12 and **RMar** 62.

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.

Justifying Blocks of Text During Reprint

Typing the original text:

1. Type until you reach the first line you want justified. (Make sure Automatic Carrier Return is on).
2. Hold down **Code** while you press **9 (Stop)** to insert a stop code.
3. Type the text to be justified. Allow the typewriter to automatically return the carrier when typing near the right margin. Only press carrier return to end paragraphs.
4. Hold down **Code** while you press **9 (Stop)** to insert a stop code.
5. Type the remaining text.

During Reprint:

1. Start Reprint (See "Reprint" on page 2-24).
2. When Reprint stops at the first stop code, hold down **Code** while you press **J (Jstify)** to begin Justification. The printwheel spins. (Automatic Carrier Return should be on.)
3. Press **RePrt** to resume reprinting. The typewriter prints justified text. The **ARtn** light flashes during justified reprint.
4. When Reprint stops at the next stop code, hold down **Code** while you press **J (Jstify)** to end Justification. (You will hear two short beeps.)
5. Press **RePrt** to resume reprinting.

Helpful Hints

- When Justification is turned on the printwheel spins. When Justification is turned off, you will hear two short beeps.
- Placement and length of variable information entered at stop codes can affect justification. If text does not print justified, exit Justification.
- The Justification setting is not saved when you turn the typewriter off.
- You cannot turn Justification on or off when Reprint stops for a pitch or language change, or when you press a key to stop Reprint.
- Justification is turned off after each reprint. You must turn on Justification for each reprint.
- For best results in using Justification, turn on the Automatic Carrier Return function when typing your text and allow the typewriter to automatically return the carrier when typing near the right margin.

Variable Information Reprint

Variable Information Reprint allows you to enter variable text at stop code locations during reprint. Variable information is text that changes with each reprint. Use "Reprint" on page 2-24 to play back the text and type variable information (name, address, and so on).

1. Type the standard text.
2. Place stop codes wherever variable information is to appear. See page 2-22 for more information on Stop Codes.
3. Start Reprint. See page 2-24.

Type the letter below, 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 .

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

Playing Back a Letter Containing Variable Information

1. Insert paper with the **Paper Bail Load Lever**. *Do not* begin typing new text. New text will replace the text you want to reprint.
2. Position the paper on the line where you want to start Reprint.
3. Press **RePrt** to start Reprint. The **RePrt** light comes on.
4. When the typewriter stops, type the variable text.
5. Press **RePrt** to continue playback.
6. Repeat steps 4 and 5 until you finish the letter.
7. Remove the paper using the *Paper Release Lever*.
8. Repeat steps 1 through 6 for additional copies.

Helpful Hints

- You can type variable information at stop code locations only.
- A Stop Code is automatically inserted whenever you change the pitch.
- When Reprint is complete, all text is modifiable. When you start Reprint again, all variable text is deleted. Extra space added during Justify is removed.

Forms

Typing on preprinted forms is a two step process: first, creating and storing the form layout; second, printing the form, and filling in information. By using the carrier and paper positioning functions along with the **Mark** and **Code + Mark** keys, *variable information* and *constant information* can be positioned on the form. Variable information is text that changes each time a form is filled out. Constant information is text that is the same each time the form is filled out and is saved with the form layout.

Preprinted forms come in both single sheet and continuous sheet packages. The typewriter supports both types of forms packages. Use the "Single Sheet Form" procedures for single sheet forms and use the "Continuous Sheet Form" procedures for forms that come in a continuous form package.

If you prefer to load and align your form into the typewriter as the first step, use the procedures described in "Creating and Saving a Continuous Sheet Form Layout" on page 2-33 and "Printing a Continuous Sheet Form" on page 2-34.

Creating and Saving a Single Sheet Form Layout

1. Make sure **ARtn** is off.
2. Hold down **Code** while you press **Forms** and press the number (**1** through **56**) of the layout you want to create. The **Application** and **Forms** lights will blink.

   Note: The typewriter will beep if you select a form layout that has already been created. Press the **Correction** key to exit the form layout, leaving it unchanged. Pressing any other key will erase the form layout.

3. Place the left edge of the form in the typewriter at the **0** paper scale position. (See Figure 2-1.)
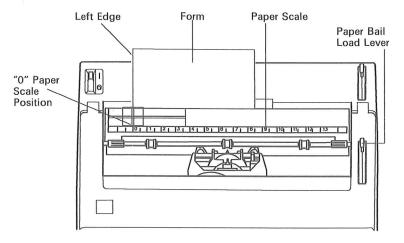
Figure 2-1.

4. Pull the **Paper Bail Load Lever** forward. The typewriter will load the form to its top edge.
5. Type the form layout by moving the carrier to the position on the form where variable or constant information should print.
   • Press **Mark** at each position where variable information is to appear.

   or

   • For constant information:
      a. Hold down **Code** while you press **Mark** at each position where constant information is to appear. The **Forms** light stops blinking but remains on.
      b. Type the constant information.
      c. When finished typing the constant information, hold down **Code** while you press **Mark**. The **Forms** light starts blinking again.

   Example:

   Code+Mark Bob Jones Code+Mark

6. Repeat step 5 for the entire form.
7. Hold down **Code** while pressing **Forms** to save the forms layout. The **Application** and **Forms** lights will stop blinking.

Note: To cancel the creation of a form layout, pull the **Paper Bail Load Lever** forward.

Printing a Single Sheet Form

1. Make sure **ARtn** is off.
2. Hold down **Forms** and press the number (**1** through **56**) of the form layout you want to print. The **Application** light will turn on and the **Forms** light will blink.
3. Place the left edge of the form in the typewriter at the **0** paper scale position. (See Figure 2-1 on page 2-31.)
4. Pull the **Paper Bail Load Lever** forward. The typewriter will load the form to the first marked position.
5. When the carrier stops, type the desired text or use the Phrase function to play out a phrase from the phrase area. (See "Phrase" on page 2-39.)
6. Press **Forms** to move to the next position on the form.
7. Repeat steps 5 and 6 for the entire form.

Note: To cancel the printing of a form, do one of the following:

- Pull the **Paper Bail Load Lever** forward.
- Press **Forms** multiple times until the end of the form layout is reached.

Creating and Saving a Continuous Sheet Form Layout

1. Make sure **ARtn** is off.
2. Place the left edge of the continuous form in the typewriter at the 0 paper scale position. (See Figure 2-1 on page 2-31.)
3. Pull the **Paper Bail Load Lever** forward.
4. Move the carrier to the starting position (first line or first box) of the form.
5. Hold down **Code** while you press **Forms** and press the number (1 through 56) of the layout you want to create. The **Application** and **Forms** lights will blink.

   Note: The typewriter will beep if you select a form layout that has already been created. Press the **Correction** key to exit the form layout, leaving it unchanged. Pressing any other key will erase the form layout.

6. Hold down **Code** and pull the **Paper Bail Load Lever** forward to indicate that the form is loaded.
7. Type the form layout by moving the carrier to the position on the form where variable or constant information should print.
   - Press **Mark** at each position where variable information is to appear.

   or
   - For constant information:
     a. Hold down **Code** while you press **Mark** at each position where constant information is to appear. The **Forms** light stops blinking but remains on.
     b. Type the constant information.
     c. When finished typing the constant information, hold down **Code** while you press **Mark**. The **Forms** light starts blinking again.

   Example:

   Code+Mark Bob Jones Code+Mark

8. Repeat step 7 for the entire form.
9. Hold down **Code** while pressing **Forms** to save the forms layout. The **Application** and **Forms** lights will turn off.

Note: To cancel the creation of a form layout, pull the **Paper Bail Load Lever** forward.

Printing a Continuous Sheet Form

1. Make sure **ARtn** is off.
2. Place the left edge of the continuous form in the typewriter at the **0** paper scale position. (See Figure 2-1 on page 2-31.)
3. Pull the **Paper Bail Load Lever** forward.
4. Move the carrier to the starting position (first line or first box) of the form.
5. Hold down **Forms** and press the number (**1** through **56**) of the form layout you want to print. The **Application** light will turn on and the **Forms** light will blink.
6. Hold down **Code** and pull the **Paper Bail Load Lever** forward. The typewriter will move to the first marked position.
7. When the carrier stops, type the desired text or use the Phrase function to play out a phrase from the phrase area. (See "Phrase" on page 2-39.)
8. Press **Forms** to move to the next position on the form.
9. Repeat steps 7 and 8 for the entire form.
10. To print the next continuous form, repeat steps 4 through 9.

Note: To cancel the printing of a form, do one of the following:

- Pull the **Paper Bail Load Lever** forward.
- Press **Forms** multiple times until the end of the form layout is reached.

Forms Full

If the typewriter beeps three times and the **Full** light blinks while you are typing a form layout, the Forms area is nearly full. If you continue to type and the **Full** light comes on solid, the Forms area is full and no more marks or constant information can be entered; the form layout can only be saved.

Helpful Hints

- The marks on the form print out in the order they were entered.
- If you type a mark by mistake or in the wrong position, press the **Correction** key to erase it.
- Form layouts are saved when you turn the typewriter off.
- Marks set temporary left margins.

Practice

Make a copy of the sample form below, or use a form from your business or home. Follow the steps on page 2-30 to practice saving and filling out the form.

Newspaper Subscription Service
Contributors List

First Name	M.I.	Last Name		Contribution Amt.
MARK	MARK	MARK		MARK

Address				Date of Contribution
MARK				MARK

City	State		Zip	ID Number
MARK	MARK		MARK	MARK

Telephone No.
MARK

Distribute to: Accounting
Publishing
Direct Mail

CODE + MARK Bob Jones CODE + MARK
Route Manager

CODE + MARK Daily News CODE + MARK
Newspaper

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

Forms **57** through **99** are pre-defined form templates that are already stored in the typewriter. These forms can only be printed. The pre-defined forms are:

Form Area Number	Form Name/Description
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 HCFA-1500 (12-90)
91	Airborne Express International Express Airbill 002 (9/88) M
92	Airborne Express U.S.Airbill 001 (5/93) S

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

Printing a Pre-Defined Form

1. Make sure **ARtn** is off.
2. Hold down **Forms** and press the number (**57** through **99**) of the pre-defined form layout you want to print. The **Application** light will turn on and the **Forms** light will blink.
3. Place the left edge of the form in the typewriter at the **0** paper scale position. (See Figure 2-1 on page 2-31.)
4. Pull the **Paper Bail Load Lever** forward. The typewriter will load the pre-defined form to the first marked position.
5. When the carrier stops, type the desired text or use the Phrase function to playout a phrase from the phrase area. (See "Phrase" on page 2-39.)
6. Press **Forms** to move to the next position on the pre-defined form.
7. Repeat steps 5 and 6 for the entire form.

Note: To cancel the printing of the pre-defined form, do one of the following:

- Pull the **Paper Bail Load Lever** forward.
- Press **Forms** multiple times until the end of the pre-defined form layout is reached.

Phrase

You may store approximately 10,000 characters representing one or more phrases in the phrase area of the typewriter. Up to **99** phrases may be stored in the typewriter. Leading and trailing carrier returns are not saved with a phrase.

Creating a Phrase

1. Hold down **Code** while you press **Phrs** and type a number (**1** through **99**). The **Application** and **Phr** lights will blink.

   Notes:
   a. The typewriter will beep if you select a phrase that has already been created. Press the **Correction** key to exit the phrase, leaving it unchanged. Press **Phrs** to revise the phrase (see "Revising a Phrase" on page 2-40). Pressing any other key will erase and reuse the phrase.
   b. The correction buffer is cleared.
2. Type the text of the phrase.
3. Hold down **Code** while you press **Phrs** to save the phrase. The **Application** and **Phr** lights will stop blinking.

Notes:

1. To cancel the creation of the phrase, pull the **Paper Bail Load Lever** forward.
2. Pitch changes should be made before opening a Phrase area.

Phrase Full

If the typewriter beeps three times and the **Full** light blinks while you are typing, the Phrase area is nearly full. If you continue to type and the **Full** light comes on solid, the Phrase area is full. No more text can be entered in the phrase and it can only be saved.

Printing a Phrase

1. Hold down **Phrs** and type a number (**1** through **99**) of the phrase you want to print.
2. The phrase will print.

   Note: During printing the **Application** light will turn on and the **Phr** light will blink. When the phrase finishes printing, the **Application** light turns off and the **Phr** light stops blinking.

Revising a Phrase

To revise an existing phrase:

1. Hold down **Code** while you press **Phrs** and type the number of the phrase to be revised. The **Application** and **Phr** lights will blink. The typewriter will beep.

   Note: The typewriter will beep if you select a phrase that has already been created. Press the **Correction** key to exit the phrase, leaving it unchanged. Pressing any other key will erase and reuse the phrase.
2. Press **Phrs**. The complete phrase prints out.

   Note: The correction buffer is cleared.
3. Use the **Correction** key and the left and right carrier movement keys (←,→) to make changes on the current line. Use word forward or word backward to move to a word on previous lines.
4. Hold down **Code** while pressing **Phrs** to save the phrase. The **Application** and **Phr** lights will stop blinking.

Deleting a Phrase

The typewriter allows you to reuse a phrase without deleting it first. (See "Revising a Phrase.") To delete a phrase:

1. Hold down **Code** while you press **Phrs** and type the number of the phrase to be deleted. The **Application** and **Phr** lights will blink. The typewriter will beep.
2. Press the **Spacebar**.
3. Press the **Correction** key twice.
4. Hold down **Code** while pressing **Phrs**. The **Application** and **Phr** lights will stop blinking and the phrase will be deleted.

Helpful Hint

• Phrases are saved when you turn the typewriter off.

Phrase Directory

Phrase directory prints a list of created phrases. The directory printout includes the phrase number, the first 30 characters of text and the amount of storage used by each phrase. The number at the top of the printout is the amount of phrase area available.

Playing the Entire Directory

1. Insert paper into the typewriter.
2. Press **Dir**.

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

```
9531
1 The Indenting Function allows     60
2 In the late nineteenth centur     70
```

Playing Part of the Directory

1. Insert paper into the typewriter.
2. Press **Dir** and the number (**1** through **99**) of the phrase you want the directory to start printing.

   Note: The directory lists the phrases 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. Phrases typed using other keyboards print incorrectly. See "Alternate Keyboards" on page 2-53.

Envelopes

The envelope function allows you to save nine of your most frequently used envelope layouts. Each envelope layout can contain up to six positions that include your return address, sending address or any other information desired.

Using the envelope function is a two step process: first, create and store the envelope layout; second, print and fill out the positions with either typed text or phrase text. (See "Phrase" on page 2-39.)

Creating and Saving an Envelope Layout

1. Make sure **ARtn** is off.
2. Hold down **Code** while you press **Envlp** and press the number (**1** through **9**) of the layout you want to open. The **Application** and **Env** lights will blink.

   Note: The typewriter will beep if you select an envelope layout that has already been created. Press the **Correction** key to exit the envelope layout, leaving it unchanged. Pressing any other key will erase the envelope layout.

3. Place the left edge of the envelope in the typewriter at the **0** paper scale position. (See Figure 2-2.)

Figure 2-2.
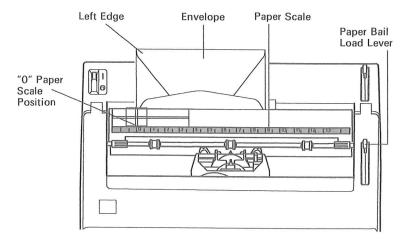
4. Pull the **Paper Bail Load Lever** forward. The typewriter will load the envelope to its top edge.
5. Move the carrier to the right edge of the envelope and press **RMar**.
6. Type the envelope layout as follows:
    a. Move the carrier to the positions where you want the typewriter to stop when printing the envelope.
    b. At each desired position, press **Mark**.
7. Repeat step 6 for each position until you finish the envelope. You have up to six positions per envelope layout.
8. Hold down **Code** while pressing **Envlp** to save the envelope layout. The **Application** and **Env** lights will stop blinking.

    Note: To cancel the creation of an envelope layout, pull the **Paper Bail Load Lever** forward.

Printing and Filling out an Envelope

1. Make sure **ARtn** is off.
2. Hold down **Envlp** and press the number (**1** through **9**) of the envelope layout you want to print. The **Application** light will turn on and the **Env** light will blink.
3. Place the left edge of the envelope in the typewriter at the **0** paper scale position. (See Figure 2-2 on page 2-42.)
4. Pull the **Paper Bail Load Lever** forward. The typewriter will load the envelope to the first position. When the carrier stops, the typewriter sets a temporary left margin.
5. Type the desired text or use the Phrase function to playout a phrase from the phrase area.
6. Press **Envlp** to move to the next position.
7. Repeat steps 5 and 6 until you finish filling out the envelope. When the envelope finishes printing, the **Application** light turns off and the **Env** light stops blinking.

   Note: To cancel printing an envelope, do one of the following:
   - Pull the **Paper Bail Load Lever** forward.
   - Press **Envlp** multiple times until the end of the envelope layout is reached.
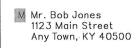
Helpful Hints
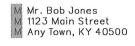
- You can mark envelope positions in any order.
- If you type a mark by mistake or in the wrong position, press the **Correction** key to erase it.
- Envelope layouts are saved when you turn the typewriter off.
- Marks set temporary left margins.

Practice

M Mr. Bob Jones
1123 Main Street
Any Town, KY 40500

M Mrs. Jane Myers
7789 Short Street
Lexington, KY 50441

M Mr. Bob Jones
M 1123 Main Street
M Any Town, KY 40500

M Lexmark International, Inc.
M 740 New Circle Road N.W.
Lexington, KY 40511

M Attention: Mrs. Jane Myers

Labels

The Label function allows you to easily handle sheets of labels. Label sheets may have a single column or multiple columns of labels and may or may not be preprinted. The typewriter allows creating up to **99** label sheet layouts in which the position and order of labels on the sheet are saved.

Using the label function is a two step process: first, create and store the label sheet layout; second, print and fill out the positions with either typed text or phrase text using the Phrase function.

Creating and Saving a Label Sheet Layout
1. Make sure **ARtn** is off.
2. Hold down **Code** while you press **Label** and press the number (**1** through **99**) of the layout you want to create. The **Application** and **Label** lights will blink.

   Note: The typewriter will beep if you select a label sheet layout that has already been created. Press the **Correction** key to exit the label sheet layout, leaving it unchanged. Pressing any other key will erase the label sheet layout.
3. Place the left edge of the label sheet in the typewriter at the **0** paper scale position. (See Figure 2-3.)
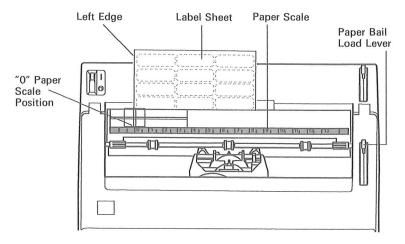
Figure   2-3.

4. Pull the **Paper Bail Load Lever** forward. The typewriter will load the label sheet to its top edge.
5. Create the label sheet layout as follows:
   a. Move the carrier to the individual label positions on the sheet of labels where you want the typewriter to stop when printing the label sheet.
   b. At each desired position, press **Mark**.
6. Repeat step 5 for each label position.
7. Hold down **Code** while pressing **Label** to save the label layout. The **Application** and **Label** lights will stop blinking.

Note: To cancel the creation of a label sheet layout, pull the **Paper Bail Load Lever** forward.

Label Full

If the typewriter beeps three times and the **Full** light blinks while you are typing, the Label area is nearly full. If you continue to type and the **Full** light comes on solid, the Label area is full and no more marks can be entered; the label sheet layout can only be saved.

Printing the Labels

1. Make sure **ARtn** is off.
2. Hold down **Label** and press the number (**1** through **99**) of the label layout you want to print. The **Application** light will turn on and the **Label** light will blink.
3. Place the left edge of the label sheet in the typewriter at the **0** paper scale position. (See Figure 2-3 on page 2-46.)
4. Pull the **Paper Bail Load Lever** forward. The typewriter will load the label sheet to the first label position.
5. When the carrier stops, the typewriter sets a temporary left margin for that label position. Type the desired text or use the Phrase function to play out a phrase from the phrase area.
6. Press **Label** to move to the next label position on the sheet.
7. Repeat steps 5 and 6 for each label. When finished with the sheet of labels, the **Application** light will turn off and the **Label** light will stop blinking.

Note: To cancel the printing of a label sheet, do one of the following:
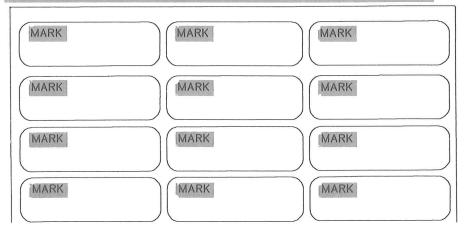
- Pull the **Paper Bail Load Lever** forward.
- Press **Label** multiple times until the end of the label sheet layout is reached.

Helpful Hints

- You can mark label positions on the sheet of labels in any order.
- If you type a mark by mistake or in the wrong position, press the **Correction** key to erase it.
- Label sheet layouts are saved when you turn the typewriter off.
- Label sheets may have a single column or multiple columns of labels and may or may not have printing on them.
- Mark sets a temporary left margin.

Practice

Make a copy of the sample label sheet below, or use a label sheet from your business or home. Follow the steps on page 2-46 to practice saving the layout and printing the label sheet.

Spell Check
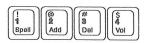
Spell Check allows the typewriter to check spelling as you type. When you type a space or punctuation after a word, the spelling is checked against a main dictionary and a supplemental dictionary. The main dictionary contains approximately 50,000 words. The supplemental dictionary can contain up to 300 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 cursor 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.
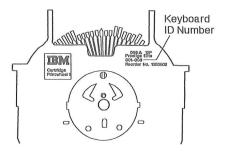
Hold down **Code** while you press 4 (**Volume**) until the spelling beep has the desired sound. The tone you select is saved when you turn the typewriter off.

Alternate Keyboards

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 2-56.

Using Alternate Keyboards

1. Select a keyboard for a country or special application from the charts on pages 2-57 through 2-65.
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**) and type the keyboard ID number. The **Lang** light 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** light 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 layout that is selected by holding down **Code** while you press **L** (**Lang**). With this sequence, a keyboard ID is not typed. (See "Secondary Keyboard Assignments" on page 2-55.)

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 (English) 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
U.S. and All others	Latin Supplemental 099

Helpful Hints

- The **Lang** light 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 reprint your original text when the correction memory is cleared.
- The alternate keyboard charts show some keybuttons with special characters. See "Special Characters (U.S. Keyboard Only)" on page 2-18.
- Many alternate keyboards contain accent marks 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.

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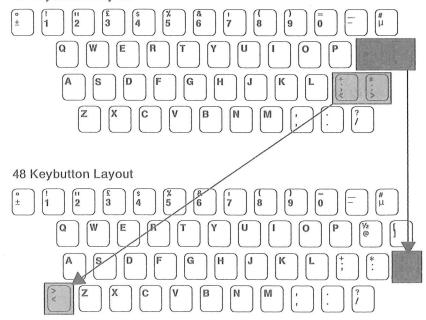
The keyboard charts show the keyboard ID numbers and character locations for each alternate keyboard. The charts are arranged numerically.

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
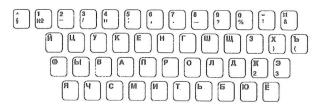
Keyboard ID 207 — Greece (Latin)

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)
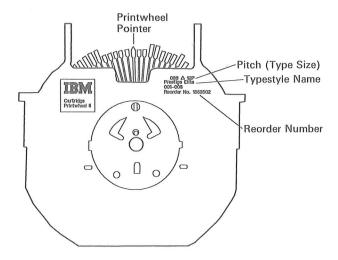
Reference

Ordering IBM Supplies

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**.

Printwheels

Your typewriter uses an IBM Cartridge Printwheel II. You can order printwheels 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 3-2 are for use with the U.S. keyboard shown on page 1-2. The United Kingdom typestyles beginning on page 3-5 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 12345 abcdefghijklmnopqrstuvwxyz 67890
☐ Gothic 15 1353719	ABCDEFGHIJKLMNOPQRSTUVWXYZ 12345 abcdefghijklmnopqrstuvwxyz 67890
☐ Prestige 15 1353655	ABCDEFGHIJKLMNOPQRSTUVWXYZ 12345 abcdefghijklmnopqrstuvwxyz 67890

Proportional Spacing

● Boldface 1353504	ABCDEFGHIJKLMNOPQRSTUVWXYZ 12 abcdefghijklmnopqrstuvwxyz 34567890
● Boldface Italic 1353059	*ABCDEFGHIJKLMNOPQRSTUVWXYZ 12* *abcdefghijklmnopqrstuvwxyz 34567890*
● Essay 1353526	ABCDEFGHIJKLMNOPQRSTUVWXYZ 12 abcdefghijklmnopqrstuvwxyz 34567890
● Essay Italic 1353750	*ABCDEFGHIJKLMNOPQRSTUVWXYZ 12* *abcdefghijklmnopqrstuvwxyz 34567890*
● Modern 1353517	ABCDEFGHIJKLMNOPQRSTUVWXYZ 12 abcdefghijklmnopqrstuvwxyz 34567890
● Thesis 1353953	ABCDEFGHIJKLMNOPQRSTUVWXYZ 12 abcdefghijklmnopqrstuvwxyz 34567890
● Title 1353952	ABCDEFGHIJKLMNOPQRSTUVWXYZ 12 abcdefghijklmnopqrstuvwxyz 34567890

Draw

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

Typestyle Samples and Pitches - United Kingdom

10 Pitch

▲ Bookface Academic 1353046	ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz	123 678
▲ Courier 10 1353567	ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz	123 678
▲ Prestige Pica 1353583	ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz	123 678

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	ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz	12345 67890
■ Prestige 15 1353683	ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz	12345 67890

Proportional Spacing

● Boldface 1353591	ABCDEFGHIJKLMNOPQRSTUVWXYZ 12 abcdefghijklmnopqrstuvwxyz 34567890
● Essay 1353631	ABCDEFGHIJKLMNOPQRSTUVWXYZ 12 abcdefghijklmnopqrstuvwxyz 34567890
● Title 1353041	ABCDEFGHIJKLMNOPQRSTUVWXYZ 12 abcdefghijklmnopqrstuvwxyz 34567890

Legend:

▲ = 10 pitch
△ = 12 pitch
■ = 15 pitch
● = proportional spacing

Printwheel Application Recommendations

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

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	B
Symbol 12	C	C	C	B

Typestyle	1 – 3 Carbon Copies	3 – 5 Carbon Copies	Stencils	Bold Print
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
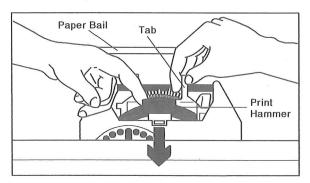
Note: There are three symbol printwheels: Symbol 10, Symbol 12, and Symbol 15. For best results, use a symbol printwheel that matches the pitch of your regular printwheel.
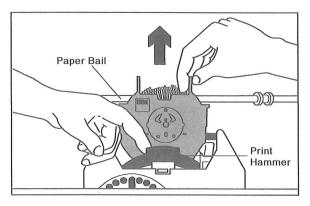
Changing the Printwheel

CAUTION:
To prevent unwanted carrier motion, make sure the Paper Bail Load Lever is in the closed position.
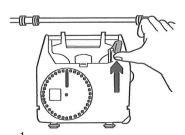
1. Pull the print hammer all the way forward and hold it.
2. Grasp the printwheel tab and lift the printwheel straight up and out of the slot. Do not scratch the ribbon.
3. Release the print hammer.
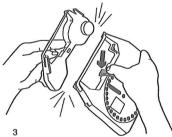
4. If the replacement printwheel is new, remove the yellow shipping seal from its center.
5. Hold the printwheel so the letters IBM are in the upper left corner.
6. Pull the print hammer all the way forward and hold it.
7. Lower the printwheel into the slot. Do not scratch the ribbon.
8. Release the print hammer.
9. Press the **Code** key. The printwheel spins.
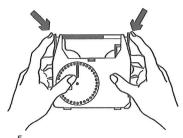
Ribbon Removal and Installation

1
Push blue lever.

2
Lift up and out.

3
Separate 2 cassettes.

4
Slide cassettes together.

5
Press gray tabs.

6
Advance tape.
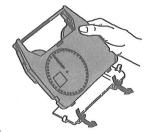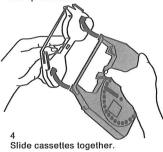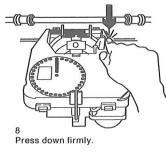
7
Slide into typewriter.

8
Press down firmly.

IBM Easystrike® Ribbons

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

Applications	Multi-purpose	High[1] Yield Correc-table	Fabric	Superior[2] Write Correc-table
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	Marginal	Fair	Fair
Reorder Number	1337764	1299845	1356000	1380999
Correction Tape				
Lift-Off Tape—1337765		○	None	○
Cover-Up Tape—1337766	○		None	

○ = Recommended   NR = Not Recommended

---

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 margins, tabs, and other settings when you turn the typewriter off. Change the batteries at least once every year (before they run down).

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

- Top Margin
- Line Space
- Expand Line Space
- Automatic Carrier Return
- Active Keyboard
- Spell Check Supplemental Dictionary
- Formats
- Variable Right Margin Zone
- Forms Area
- Envelope Area
- Phrase Area
- Label Area.

Use only size AA alkaline batteries (for example, Duracell[5] type MN 1500, Eveready[6] type E91, Ray-O-Vac[7] type 815, or equivalent). *Do not use rechargeable batteries.*

Checking the Batteries

If the beep sounds three times and the **Line Space** lights blink continuously when you turn the typewriter on, do 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, margins and other settings will be lost.

---

5 Trademark of Duracell, Inc.
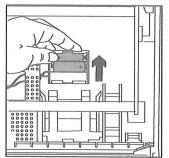
6 Trademark of the Union Carbide Corp.
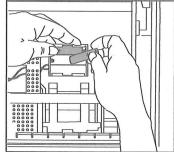
7 Trademark of the Ray-O-Vac Corp.

Replacing Batteries

Warning: Do not turn the typewriter off while replacing batteries. If you do, margins and other settings will be lost.
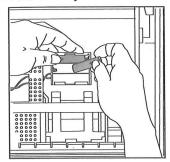
1. Turn the typewriter on and raise the cover.
2. Locate the black plastic battery holder at the right front of the typewriter.
3. Remove the holder by putting your finger under it and pulling up. Carefully pull the holder out as far as it can go.
4. Push batteries against the spring ends of the holder and pop out.
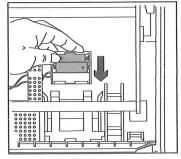
5. Install two new batteries in the holder. Match the plus (+) signs on the batteries to the plus signs inside the holder.

6. Fold any excess wire in the empty slot of the battery holder.
   Place the battery holder back in the typewriter.
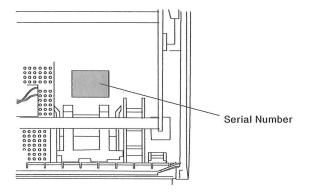
Note: The battery holder contains three openings. Be sure to place batteries in *only* the two holder positions that contain springs. The batteries will *not* save margins and other settings unless each battery is properly installed.

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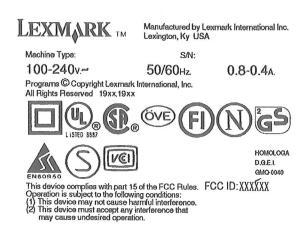
Important: Use only a damp cloth and mild detergent to clean the typewriter cover and keybuttons. Certain cleaning fluids may be harmful. *Do not use* IBM cleaning fluid.

Serial Number

Serial Number

To locate the serial number on your typewriter, look on the right of the inside bottom cover. The serial number is on the voltage label behind the batteries.

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: S/N:
100-240v.~   50/60Hz.   0.8-0.4A.
Programs © Copyright Lexmark International, Inc.
All Rights Reserved   19xx,19xx

HOMOLOGA
D.G.E.I.
GMQ-0040

EN60950

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" 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 3-15 for location of this information.

Problem Determination Index

Beep and Light Signals

Typewriter Beeps Three Times and Line Space Lights Blink

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

1. If all the **Line Space** lights blink together, the batteries have failed and machine settings have been lost.
2. If the **Line Space** lights 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 lights 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 Lights 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 Lights Stay On

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

No Lights 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 1-24.

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 page 2-4.

Wrong Characters Print or Space Incorrectly

1. Turn the typewriter off, then turn the typewriter on again and try typing.
2. Turn the **Lang** light off if it is on.
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 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** light is not blinking, install the correct pitch printwheel. If the **Lang** light 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 1-17.
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 Reprint
1. Use the same pitch printwheel used when the text was typed.
2. Insert another sheet of paper and reprint 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 Lights 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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